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This catalog is a guide for information only and is not a contract. This catalog becomes effective Fall Semester 1992 and extends through the Summer Session 1993. The official University address is The Wichita State University, 1845 Fairmount, Wichita, Kansas 67208-1595. The general university telephone number is (316) 689-3456. For admission information, call toll-free (800) 362-2594.

The University reserves the right to revise or change rules, charges, fees, schedules, courses, requirements for degrees and any other regulations affecting students whenever considered necessary or desirable. The University reserves the right to cancel any course for insufficient registration and to phase out any program.
### Academic Calendar for 1992-93

#### Fall Semester 1992

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>August 17-22</td>
<td>Fall semester registration</td>
</tr>
<tr>
<td>August 24</td>
<td>Classes begin</td>
</tr>
<tr>
<td>September 5-7</td>
<td>Labor Day, holiday</td>
</tr>
<tr>
<td>October 16</td>
<td>Midterm point</td>
</tr>
<tr>
<td>November 1</td>
<td>Priority application due date for spring financial aid award</td>
</tr>
<tr>
<td>November 16-24</td>
<td>Final date for withdrawal with nonpenalty grades</td>
</tr>
<tr>
<td>November 25-29</td>
<td>Pre-registration period for spring semester (exact dates published in the Schedule of Courses)</td>
</tr>
<tr>
<td>December 10</td>
<td>Thanksgiving recess</td>
</tr>
<tr>
<td>December 11</td>
<td>Last day of classes</td>
</tr>
<tr>
<td>December 12-18</td>
<td>Study day</td>
</tr>
<tr>
<td>December 19</td>
<td>Final examinations</td>
</tr>
</tbody>
</table>

#### Spring Semester 1993

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>January 11-16</td>
<td>Spring semester registration</td>
</tr>
<tr>
<td>January 18</td>
<td>Martin Luther King, Jr. Day, holiday</td>
</tr>
<tr>
<td>January 19</td>
<td>Classes begin</td>
</tr>
<tr>
<td>March 15</td>
<td>Priority application due date for fall financial aid awards</td>
</tr>
<tr>
<td>March 19</td>
<td>Midterm point</td>
</tr>
<tr>
<td>March 22-28</td>
<td>Spring recess</td>
</tr>
<tr>
<td>March 29</td>
<td>Classes resume</td>
</tr>
<tr>
<td>April 1</td>
<td>Priority application due date for summer financial aid awards</td>
</tr>
<tr>
<td>April 2</td>
<td>Final date for withdrawal with nonpenalty grades</td>
</tr>
<tr>
<td>April 14-23</td>
<td>Pre-registration period for fall semester (exact dates published in the Schedule of Courses)</td>
</tr>
<tr>
<td>May 10</td>
<td>Last day of classes</td>
</tr>
<tr>
<td>May 11</td>
<td>Study day</td>
</tr>
<tr>
<td>May 12-18</td>
<td>Final examinations</td>
</tr>
<tr>
<td>May 16</td>
<td>Commencement</td>
</tr>
<tr>
<td>May 19</td>
<td>Spring semester ends</td>
</tr>
</tbody>
</table>

#### Summer Session 1993

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>May 31</td>
<td>Memorial Day, holiday</td>
</tr>
<tr>
<td>May 24-June 14</td>
<td>Pre-session and workshops</td>
</tr>
<tr>
<td>June 1-4</td>
<td>Summer Session registration</td>
</tr>
<tr>
<td>June 7</td>
<td>Classes begin, first four-week term</td>
</tr>
<tr>
<td>July 2</td>
<td>Last day of first four-week term; registration for second four-week term</td>
</tr>
<tr>
<td>July 5</td>
<td>Independence Day, holiday</td>
</tr>
<tr>
<td>July 6</td>
<td>Classes begin, second four-week term</td>
</tr>
<tr>
<td>July 30</td>
<td>Summer Session ends</td>
</tr>
</tbody>
</table>

#### Notice of Non Discrimination

Applicants for admission and employment, students, parents, and employees are hereby notified that The Wichita State University does not discriminate on the basis of race, color, national origin, sex, age or handicap in admission or access to, or treatment or employment in, its programs and activities. Any person having inquiries concerning The Wichita State University's compliance with the regulations implementing Title VI, Title IX, or Section 504 is directed to James J. Rhatigan, Vice President for Student Affairs and Dean of Students, 1845 Fairmount, Wichita, Kansas 67208-1995, (316) 689-3021. Dr. Rhatigan has been designated by Wichita State to coordinate the institution's efforts to comply with the regulations implementing Title VI, Title IX, and Section 504. Any person also may contact the Assistant Secretary for Civil Rights, U.S. Department of Education, regarding the institution's compliance with these regulations.

Produced by the Office of University Publications; Jody Stott, Editor; and Kent Basgall, Designer.
General Information

1991-92 University and Academic Officers
Warren B. Armstrong, President of the University
Rex Cottle, Provost and Vice President for Academic Affairs
Elizabeth King, Vice President for University Advancement
Roger D. Lowe, Vice President for Administration and Finance
James J. Rhatigan, Vice President for Student Affairs and Dean of Students
Michael Tilford, Dean of Graduate Studies
R. Malcolm Richards, Dean of the W. Frank Barton School of Business
Marraine A. Fry, Dean of the College of Education
William J. Wilhelm, Dean of the College of Engineering
Rhoda-Gale Pollack, Dean of the College of Fine Arts
M. Diane Roberts, Dean of the College of Health Professions
Phillip D. Thomas, Dean of Fairmount College of Liberal Arts and Sciences
Jacqueline J. Snyder, Dean of Continuing Education
Jasper G. Schad, Dean of Libraries
James W. Kelley, Dean of University College and Associate Vice President for Student Affairs
Frederick Sudermann, Executive Assistant to the President and Director of Governmental Relations

Board of Regents
State of Kansas
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Robert Caldwell, Salina
Rick Harman, Shawnee Mission
Charles H. Hostetler, Manhattan
Jo Ann C. McDowell, Independence
John G. Montgomery, Junction City
Shirley Palmer, Fort Scott
Frank C. Sabatini, Topeka
Donald C. Slawson, Wichita
Stanley Z. Koplik, Executive Director, Topeka

Mission Statement
In December 1986, the Kansas Board of Regents approved the following mission statement for The Wichita State University:

The Wichita State University is an urban university with a focused mission intended to meet the industrial, business, educational, social and cultural needs of the greater Wichita area. The University’s primary goal is to serve citizens in the thirteen-county area surrounding Wichita and Sedgwick County, with special sensitivity to the large number of minority citizens residing in the urban area. Its urban student body is predominantly part-time and beyond the traditional college age, thus requiring special support services.

Programs of study in the liberal arts and sciences, fine arts, business, engineering, education and, health and human services lead to the associate through the doctoral degree, but primary emphasis is at the bachelor's and master’s level. Building on a foundation in the liberal arts and sciences, the institution’s unique role resides in the delivery of programs in the visual and performing arts, engineering, business and education.

Terminal degrees currently approved are the Master of Fine Arts in studio arts and in creative writing, and the Doctor of Philosophy in applied mathematics; chemistry; communicative disorders and sciences; aerospace, electrical, industrial, and mechanical engineering; and human factors psychology. A Doctor of Education is available in educational administration. At an appropriate time, the institution will pursue development of a joint doctoral degree with the University of Kansas and Kansas State University in computer science.

Research activity will occur principally in those areas with existing terminal degrees and those identified for terminal degrees. Applied research related to industry in the service area is the major thrust of these activities.

Service activities such as those conducted at the Center for Economic Development and Business Research, the Center for Entrepreneurship, the Small Business Development Center, the National Institute for Aviation Research, and the Hugo Wall Center for Urban Studies are especially tailored to meet the needs of the institution’s service area.

Profile of The Wichita State University
The Wichita State University is distinguished from other state-supported schools in Kansas by its urban setting. Wichita State's location in the largest city in Kansas enhances the traditional classroom experience by providing students greater opportunities in resources, contacts with business and government leaders, employment, and internships.

With an enrollment of some 16,000, Wichita State prides itself on specialized attention to each student. Although the University's students come from almost every state in the Union and 70 foreign countries, more than 89 percent are from Kansas representing every county in the state.

Because of its urban setting, the Wichita State University has two student bodies—traditional and nontraditional. The average student age is 28, about one-third are married and 58 percent work full- or part-time. Although the nontraditional students are in the majority, there are 7,000 traditional students, ages 18 to 23, who devote themselves full-time to school and campus activities.

The Wichita State University offers more than 60 undergraduate degree programs in more than 150 areas of study in six undergraduate colleges: W. Frank Barton School of Business, College of Education, College of Engineering, College of Fine Arts, College of Health Professions, and Fairmount College of Liberal Arts and Sciences. The Graduate School offers an extensive program including 42 master's degrees which offer study in more than 100 areas; specialist in education degrees; and doctoral degrees in applied mathematics; chemistry; communicative disorders and sciences; human factors psychology; educational administration; and aerospace, electrical, industrial, and mechanical engineering. A complete listing of the programs and degrees offered at The Wichita State University is located on the inside back cover of the Catalog.

Committed to fulfilling the needs of each student, WSU offers the traditional fall and spring semesters; it has the largest number of evening and summer course offerings in the Kansas Board of Regents' system. The Summer Session features a flexible time format with a two-week pre-session and two four-week sessions held concurrently with the regular eight-week session.

Although WSU's first commitment is to excellence in instruction, it has an equally
strong commitment to excellence in research and public service as integral parts of its educational mission.

An important resource to the Wichita area business community, Wichita State supports research and development through programs such as the Center for Productivity Enhancement. The corporate community utilizes programs offered by the University's Center for Management Development for continuing professional development. The Center for Entrepreneurship and Small Business Management encourages development of small businesses, while the Hugo Wall Center for Urban Studies supports local and state government activities.

The 330-acre campus is modern and accessible and at the same time retains the flavor of the University's 97-year heritage. Fifty pieces of sculpture by internationally known artists adorn the campus. Personnages Oiseaux, a colorful mural created by the great Spanish artist Joan Miro, is displayed on the wall of the Edwin A. Ulrich Museum of Art.

During the past 15 years, Wichita State has more than doubled its instructional space, adding major buildings for art, engineering, health sciences, biological sciences, physical education, dance, and liberal arts and sciences.

One of the newest additions makes Media Resources Center the most comprehensive telecommunications facility in the state. Another part of this three-stage construction project was the expansion and renovation of Ablah Library completed in 1989.

Five other new buildings on the campus also were completed in 1989. They are Devlin Hall, which houses the Center for Entrepreneurship; the National Institute for Aviation Research which enhances the University's research association with the local aircraft industry; the K.T. and Mary Inez Woodman Alumni Center, which is an office complex for the Endowment Association, Alumni Association, and Board of Trustees staff; the Gaddis Physical Plant complex; and a new golf course maintenance building.

More than 190 social and special interest clubs provide opportunities for students to meet and work with others who share their interests. Eight national sororities and 13 national fraternities are active on campus.

There are sports opportunities in tennis, cross-country, basketball, track, golf, crew, soccer and bowling for all students. Teams also are fielded in baseball for men and volleyball and softball for women.

History

Wichita State began as Fairmount College and was operated by the Congregational Church from 1895 until 1926 when by a vote of the citizens of Wichita, it became the first municipal university west of the Mississippi.

After 38 years as a municipal university, WSU again changed its status July 1, 1964, when it officially entered the state system of higher education. Now, The Wichita State University is one of six state universities governed by the Kansas Board of Regents.


Policies

Human Relations

Notice of nondiscrimination. Applicants for admission and employment, students, parents, and employees are hereby notified that The Wichita State University does not discriminate on the basis of race, color, national origin, sex, age, or handicap in admission or access to, or treatment or employment in, its programs and activities. Any person having inquiries concerning The Wichita State University's compliance with the regulations implementing Title VI, Title IX or Section 504 is directed to James J. Rhatigan, Vice President for Student Affairs and Dean of Students, 1845 Fairmount, Wichita, Kansas 67208-1595, (316) 689-3021. Dr. Rhatigan has been designated by Wichita State to coordinate the institution's efforts to comply with the regulations implementing Title VI, Title IX and Section 504. Any person also may contact the Assistant Secretary for Civil Rights, U.S. Department of Education, regarding the institution's compliance with these regulations.

Student Responsibility

Students at The Wichita State University have the following responsibilities:

1. To consult their advisers on all matters pertaining to their academic careers, including changes in their programs

2. To observe all regulations of their college and select courses according to the requirements of that college

3. To attend all meetings of each class in which they are enrolled (instructors will announce at the beginning of the semester if they consider attendance in computing final grades)

4. To fulfill all requirements for graduation

5. To be personally responsible for fulfilling all requirements and observing all regulations at Wichita State

6. To answer promptly to all written notices from advisers, faculty, deans, and other University officers

7. To file an Application for Degree card in the dean's office of the appropriate college at least two semesters before the expected date of graduation

8. To enroll in only those courses for which the stated prerequisite(s) (if there are any) have been satisfactorily completed. Failure to comply with this procedure may result in administrative withdrawal.

Students should also comply with the principles in the following statement, which was adopted by the Student Senate, the Faculty Senate, and the Administrative Council of the University:

The Wichita State University reaffirms the principle of intellectual freedom in scholarly activity for University students, and it recognizes the full citizenship rights of students in inquiry, discussion, and such actions as they may choose to take on public issues.

The rights and freedoms of students involve concomitant responsibilities. Incumbent on all students, as on all citizens, is the responsibility to observe the University's rules of orderly procedures and the laws of the larger community of which the University is a part. In the matter of actions on public issues, to speak one's opinion, to petition, to distribute literature, to assemble peacefully and hold meetings, to use the persuasion of ideas and other actions within the bounds of orderly and lawful procedures are sanctioned by the University. But infringement of the rights of others, acts or threats of violence to persons, destruction of property, disruption, or other interference with the normal functioning of the University, and its personnel and other disorderly and unlawful acts will not be countenanced.

Within its sphere of responsibilities the University will afford students proper procedural safeguards to resolve matters in dispute. Those who willfully violate University standards must expect to face disciplinary action on the part of the institution, which may include reprimand, probation, or suspension, consistent with
Academic Honesty

Opportunities for learning at The Wichita State University involve the students' rights to express their views and to take reasoned exception to the views of faculty; to examine all questions felt to be appropriate to a course of study; to be protected from improper disclosure of their views and beliefs; to be examined in a fair and impartial manner; and to be treated with dignity and respect. Students are responsible, however, for learning the content of any course of study outlined by their instructors, regardless of any views or judgments privately held and for demonstrating their attainment in an honest manner.

Students who compromise the integrity of the classroom are subject to disciplinary action on the part of the University. Violations of classroom standards include:

1. Cheating in any form, whether in formal examinations or elsewhere
2. Plagiarism, using the work of others as one's own without assigning proper credit to the source
3. Misrepresentation of any work done in the classroom or in preparation for class
4. Falsification, forgery or alteration of any documents pertaining to academic records
5. Disruptive behavior in a course of study or abusiveness toward faculty or fellow students.

A standard of honesty, fairly applied to all students, is essential to a learning environment. Students violating such standards must accept the consequences; penalties are assessed by appropriate classroom instructors or other designated people. Serious cases may result in discipline at the college or university level and may result in suspension or dismissal.

Dismissal from a college for academic dishonesty constitutes dismissal from the University. Students accused of or found guilty of a standard of honesty may protect themselves through established academic appeal procedures and are assured of due process and the right of appeal from accusations or penalties felt to be unjust.

Open Records

Students may inspect and review their educational records maintained by Wichita State. According to law, the University is allowed 45 days to respond to the requests, but typically less time is required.

Students wishing to challenge the accuracy of their records are entitled to a hearing, upon written request to the dean of the college in which they are enrolled. The hearing is arranged by the dean.

Students also may receive the names of people from outside the University who request access to their records and the reason for such request. Similarly, students may also be informed of requests for records from individuals within the University who normally do not review student's education records.

Information in a student's record will not be released without his or her written permission.

Exceptions to these statements are noted in Public Law 93-380. A copy of the law is available to all students in the Division of Student Affairs, Grace Wilkie Hall.

Accident or Injury

The State of Kansas and The Wichita State University do not insure against accidents or injury to students which may occur during University-sponsored activities on or off campus. The University will make every reasonable attempt to advise students concerning potential danger of accident or injury. Students are expected to act responsibly by taking necessary precautions to prevent accidents. Students are also advised to protect themselves from the financial burden of accident or injury through a personal insurance policy.

Admission to Wichita State

Wichita State admits degree-bound college freshmen and transfer students as well as nondegree students who have special interests in college credit work but no immediate degree objectives at The Wichita State University.

All students entering Wichita State for the first time must file an application for admission with the Office of Admissions, 111 Jardine Hall, and all but special open admission students (discussed later) must have transcripts of all high school and/or college work sent to Wichita State. Failure to report all schools attended will result in dismissal.

Both the application and official transcripts of previous work should be received by the admissions office on or before August 1 for fall registration and January 1 for spring registration. Applications and transcripts from high school students will be accepted any time after their senior year and should be submitted during the first semester of their senior year.

Transcripts sent to the Office of Admissions must be mailed directly from the recording institution and will not be returned to the applicant. College transcripts brought by students cannot be accepted.

New students may begin their college study during the Summer Session, the fall semester or the spring semester. Prospective students are encouraged to visit Wichita State to discuss their educational plans with an admissions officer and other University staff members.

Admission of a student to The Wichita State University is independent of race, color, national origin, sex, age, or handicap. Any person having inquiries concerning this may contact James J. Rhatigan, Vice President for Student Affairs and Dean of Students, 1845 Fairmount, Wichita, Kansas 67208-1595, (316) 689-3021.

Degree Bound Students

Freshmen

Students who will graduate from accredited Kansas high schools and will not attend another college before coming to Wichita State will be admitted to the University as freshmen after submitting an application and a high school transcript. Scores from the test battery of the American College Testing Program (ACT) must also be submitted before enrollment. Application may be completed in one of two ways:

1. Students may apply by taking the American College Test (ACT) and having the results sent to Wichita State (college code 1472). Upon receipt of the ACT scores, the WSU admissions staff completes a copy of the application and sends the form to the students. The students must then verify the data on the application, sign it, and give it to their high school counselor, who should attach a six-semester high school transcript and return the forms to Wichita State. A Certificate of Admission will then be mailed to the students.

2. Students may also apply by completing a regular University application for admission and having a six-semester transcript and ACT scores sent to the University.

Students who have already graduated
from accredited Kansas high schools and have not attended another college will also be admitted to the University after submitting an application and having their high school send an official transcript to Wichita State's admissions office. ACT scores must also be submitted before enrollment. Graduates of nonaccredited Kansas high schools must submit acceptable ACT scores to be admitted to Wichita State.

Out-of-state students who will be or have been graduated from a non-Kansas high school must also submit an application, transcript and ACT or SAT test scores. To be eligible for admission, out-of-state students must (1) rank in the upper one-half of their high school graduating class or (2) have high school grades of 2.00 or better on a 4.00 system. Exceptions may be made under special circumstances when valid reasons prevail. Priority of admission among out-of-state students is given to sons and daughters of Wichita State alumni.

Students who have not graduated from high school but have an equivalency certificate may apply by submitting an application for admission and official scores from the General Educational Development (GED) test. ACT scores also are required if the student is admitted. Admission is based on the GED scores.

All entering freshmen are enrolled in University College. The orientation program will send all freshmen complete information about orientation and enrollment. See the University College section of the Catalog for more information.

Students in University College must meet the admissions standards of the degree-granting colleges before transferring into them. The individual college admissions requirements are given at the beginning of each college's section in the Catalog.

Transfers

Students who have been enrolled in another college or university may be admitted to undergraduate study at The Wichita State University if they have a minimum overall collegiate grade point average of 2.00 on a 4.00 system, are eligible to return to the college or university they last attended, and are able to meet the required scholastic standards of a college at Wichita State. Specific standards are given in each college's section of the Catalog.

If possible, transfer students should apply at least one semester before the semester in which they plan to enter Wichita State in order to receive maximum consideration for financial assistance and registration programs.

Transfer students are divided into two categories: (1) those with fewer than 24 college semester hours of credit or an undeclared major or who have not completed the Basic Skills component of the General Education Program and (2) those with declared majors and 24 or more college semester hours of credit and who have completed the Basic Skills component of the General Education Program. The latter includes six hours of English composition, three hours of communications, and three hours of college-level mathematics (see page 17).

Students must submit to Wichita State's Office of Admissions an application and an official transcript from their last high school and each college or university attended. International students should submit all materials to the Office of International Admissions.

1. Transfer students with fewer than 24 college semester hours of credit or an undeclared major or who have not completed the Basic Skills component of the General Education Program will be considered for admission to University College. Before enrollment, students must submit scores from the American College Test (ACT). Further details on transferring to a degree-granting college are given in the University College section of this Catalog.

2. Transfer students who have declared a major, have 24 or more college semester hours of credit and have completed the Basic Skills component of the General Education Program are eligible to apply for admission to one of the six undergraduate degree-granting colleges.

Students transferring from a two-year college must complete at least 60 hours of four-year college work and 40 hours of upper-division work in order to qualify for graduation from Wichita State. In no case will work done in a two-year college be credited as junior- or senior-level work at Wichita State. (See requirements for graduation given in the Academic Information section.)

Wichita State participates in the Transfer and Articulation Agreement of the Kansas Public Community Colleges and State Colleges and Universities. The agreement stipulates that:

A student who completes an associate degree based on a bachelor's oriented sequence at a state and regionally accredited Kansas public community college and whose program of studies has met the requirements of the Kansas Public Community College and State College and University Transfer and Articulation Agreement will be accepted with junior standing and will have satisfied the lower-division general education requirements of all Regents' institutions of the state (subject to points of clarification agreed to by community colleges and state schools).

In accepting university-level courses from other recognized colleges and universities for transfer credit, Wichita State relies on practices outlined in Transfer Credit Practices of Selected Educational Institutions, published by the American Association of Collegiate Registrars and Admissions Officers. While the credit practices publication does not constitute accreditation, it does provide helpful information for general credit acceptance. More specifically, the transferability or transfer course equivalency is determined by the appropriate Wichita State department for each course from another institution. That information, for the Kansas Community Colleges, is published in a Transfer Guide.

Other credit transfer information may be obtained from the transcript analysts in Wichita State's Office of Admissions. International students may obtain information on transfer credit from foreign colleges and universities from the Office of International Admissions.

As a minimum graduation requirement each student must complete each basic skills course in the Basic Skills component of the General Education Program with a grade of C or better. This requirement applies to basic skills courses taken at Wichita State or transferred for credit from other institutions, including Kansas public community colleges and state universities.

Wichita State degree-bound students should speak with an advisor before enrolling in courses at another institution.

Courses completed at other institutions but not acceptable for credit toward a degree at Wichita State are excluded from credit and grade point average evaluation.

Credit hours and credit points accepted toward a Wichita State degree are computed with credit hours and credit points earned at Wichita State in calculating the student's total grade point average.

The distribution of transfer courses that may fulfill either a major or minor requirement must be approved by the chairperson of the department concerned. Department chairpersons may require
additional work for a major, regardless of the credit granted to the student.

International Students
Recognizing the many benefits that arise from the interaction of U.S. and foreign students and scholars on our campus, The Wichita State University demonstrates a commitment to international education through its Office of International Admissions and its Office of International Programs, the availability of an intensive English program, special courses within departments, and community services such as host family programs for international students.

International students applying as undergraduates may be admitted to Wichita State according to the following guidelines:
1. They must be graduated from an accredited or recognized secondary school. If they have attended a college or university, they must have achieved an acceptable record. International students are not required to take the ACT or SAT exams.
2. They must submit an international student application form and a nonrefundable $40 international student application processing fee.
3. They must present proof of proficiency in English. Undergraduate applicants who have not taken the Test of English as a Foreign Language (TOEFL) or whose score is below 530, must take an English proficiency test upon arrival on campus. Students who score 80 or higher (TOEFL equivalency of 530) on the proficiency test enroll in their academic program. Those who score between 75 and 79 (500 to 529 TOEFL equivalency) enroll in a half-time academic program (two classes for up to eight credit hours) concurrent with half-time Intensive English enrollment. Students who score below 75 (TOEFL equivalency of less than 500) are required to complete at least one semester of full-time study in the Intensive English Language Center before enrolling in any academic classes. After one semester of Intensive English, students may take the TOEFL, which is administered on campus nine times each year. Those who score less than 530 continue enrollment in Intensive English on a full-time or part-time basis as determined by the score ranges mentioned above.
4. They must submit a statement of financial responsibility in the amount of $10,800 to cover expenses for one academic year (9 months). The amount required for 12 months, including Summer Session enrollment, is $13,400. Enrollment in the Summer Session is not required, but is available to students who wish to accelerate their progress towards a degree. All international students are considered nonresidents for tuition and fee purposes. See the Tuition section of this Catalog for additional details.

The Wichita State University has a rolling admissions policy, which means that all applications are processed promptly as they are received. There are no application deadlines. However, students whose applications are received too late to permit processing for the term requested will be admitted for the following term. All required records and forms must be received in the Office of International Admissions prior to admission. Students are expected to arrive and enroll at the University during registration week at the beginning of the term.

The University is committed to a policy of nondiscrimination and welcomes students of all racial, religious, ethnic, and cultural backgrounds. Admission decisions are based on the academic qualifications of applicants.

Admission decisions for students with non-U.S. educational records are based on the standard reference sources available to international admissions officers. Students with transfer work from U.S. universities or colleges must have achieved a minimum grade point average of 2.000 on a scale of 4.000.

The University will not assume financial responsibility or guarantee monetary assistance for any student, including international students. Prospective and enrolled students must have sufficient financial support available to meet all the expenses of tuition, fees, books, room and board, etc. The maintenance of adequate financial support is a condition for admission and continued enrollment.

No scholarships or grants are available to newly entering undergraduate international students. Graduate students may apply to the Graduate School for information on graduate fellowships and assistantships.

Under regulations of the U.S. Immigration and Naturalization Service, all international students are required to maintain full-time enrollment while in the U.S. Full-time enrollment is 12 credit hours per semester for undergraduates, nine credit hours per semester for graduate students and 25 clock hours weekly for students in the Intensive English Language Center.

For further information or to obtain an application form, write:
Office of International Admissions
The Wichita State University
Wichita, Kansas 67208-1595
U.S.A.
Telephone: (316) 689-3232
Fax: (316) 689-3777
Telex: 417423

Graduate Students
Several categories of admission to The Wichita State University Graduate School are available. Students seeking a graduate degree must have at least a bachelor's degree from a regionally accredited institution based on credits comparable to those allowed toward a degree by Wichita State, a minimum grade point average of 2.000 on a scale of 4.000. Individual departments and programs have specified admission standards. No scholarships or grants are available to meet all the expenses of tuition, fees, books, room and board, etc. The maintenance of adequate financial support is a condition for admission and continued enrollment.

Graduate students may apply to the Graduate School for information on graduate fellowships and assistantships.

Under regulations of the U.S. Immigration and Naturalization Service, all international students are required to maintain full-time enrollment while in the U.S. Full-time enrollment is 12 credit hours per semester for undergraduates, nine credit hours per semester for graduate students and 25 clock hours weekly for
Admissions. Students seeking graduate school, 107 Jardine Hall, (316) 689-3095.

and send copies of all college transcripts, credit should write or call the Graduate admission policy.

25 years old, must have been out of a wishing to continue their education with programs or to obtain graduate applica-

10

1

or high school transcript

or with academic advisers in their college of enrollment.

point average from their home institu-

The Committee also considers petitions from students seeking exceptions to specific academic rules and regulations. Students are advised to begin the petitioning process by consulting with academic advisers in their college of enrollment.

Nondegree-bound Students

Wichita State encourages students to pursue their educational goals. People wishing to continue their education with no immediate degree plans should apply and send copies of all college transcripts, or high school transcript if no college has been attended, to Wichita State's Office of Admissions. Students seeking graduate credit should write or call the Graduate School, 107 Jardine Hall, (316) 689-3095.

Open Admission Students

To expedite admission for adult students who have not participated in formal education for some time, the Office of Admissions provides a simplified admission procedure. Students will be admitted to the nondegree program as special open admission students:

1. If they have graduated from an accredited high school, or have completed a GED, and have not attended any school for two years or

3. If they are currently on active military duty or

4. If they hold a bachelor's or higher degree.

Students admitted under the open admission policy need only submit an application for admission. Test scores and transcripts are not required.

Students admitted as open admission students will be considered nondegree bound for their first 15 semester hours. In order to pursue work beyond the semester in which the 15th hour is completed, students will be required to submit transcripts and/or test scores to be accepted as degree-bound students in University College or in one of the degree-granting colleges of the University. Students may also elect to continue as regular nondegree students in University College, which also requires submission of transcripts/test scores.

Guest Students

Students attending another college or university who wish to attend Wichita State on a temporary basis in the Summer Session should submit an application to the Office of Admissions. Students applying for guest admission in the fall or spring semester must also submit an official transcript showing a 2.000 grade point average from their home institution. Guest admission is granted for a total of 15 semester hours and students who plan to continue at Wichita State beyond that limit must submit complete credentials. Students from other universities are usually enrolled as nondegree students in University College.

High school seniors who attend Wichita State before graduation from high school are also considered guest students. To be considered for admission as a high school guest student, students who have completed their junior year should submit an application and an official high school transcript and obtain their principal's permission to take college courses while still in high school. Younger students who wish to enroll for college work will be considered on an individual basis. The school principal's strong recommendation and a carefully prepared justification for enrollment is required before consideration is given.

International students on a student visa issued for another institution may be admitted as guest students at Wichita State providing they meet all criteria for admission outlined in the International Students section, including the TOEFL requirement.

Residence Defined

The Kansas legislature, rather than University policy, determines the residence of students entering Wichita State. The legislature has also granted the Kansas Board of Regents certain authority to adopt regulations and guidelines for the determination of residence, within the broader state law. The law and regulations are different than those that govern residency for any other purpose.

According to the law and regulations, a resident, for tuition purposes, is someone who has resided (been physically present) in Kansas for 12 consecutive months prior to enrollment/reenrollment and who has demonstrated, during those 12 months, the intent to make Kansas their permanent home. Intent is evaluated in light of: 1) the person's statement about why they came to Kansas in the first place and 2) what the person has done since coming to Kansas (objective, verifiable facts). Many factors are considered when evaluating intent. The Kansas Board of Regents' guidelines list nonconclusive factors or circumstances that could help support a claim for resident classification. The guidelines also specify a qualifier, "Any such factor, to be given weight, must be of at least one year's duration prior to enrollment/reenrollment."

A person who comes to Kansas to go to school, and who enrolls full-time every semester after arriving, may not be able to demonstrate the intent to remain in Kansas permanently, as long as that pattern continues. In contrast, certain specific exceptions are authorized by state law. The following people, and their spouses and dependents, are authorized to pay the equivalent of resident fees: (a) employees of the University, (b) people on full-time active military duty, stationed in Kansas;
(c) people discharged or retired from active military service under conditions other than dishonorable while serving in Kansas, (d) people who have lost their Kansas resident status within six months of their enrollment, (e) people who graduated from an accredited Kansas high school within 12 months of their enrollment at a state university; and (f) people who were recruited to, or transferred to Kansas for a full-time job. The last exception requires certification by the employer on a special form, within 30 days after the semester begins. The form can be obtained from the Registrar’s Office.

Residency of new students enrolling for the first time at Wichita State is determined by the admissions office according to the above law/regulations. Such students should address questions concerning residency to the Admissions Office. Continuing students should follow the procedure outlined below.

The responsibility of registering under proper residence is placed on the students. If there is any possible question of residence classification, it is the duty of a student when registering and paying fees to raise the question with the Registrar’s Office. Students who disagree with their residency classification are entitled to an appeal, provided they file a written appeal with the registrar within 30 days from enrollment and pay the fees as originally assessed. A standard appeal form is provided by the Registrar’s Office. If notice of the appeal is not given in writing within 30 days, the classification or reclassification by the registrar becomes final. Appeals are reviewed and decided by the Faculty Committee on Residency, and its decision is final. The committee is not empowered to make exceptions, just to apply the law and regulations to individual circumstances.

Students must report their correct address at the time of registration each semester. The address given must be the student’s actual place of residence, since it will be the one to which all correspondence from Wichita State is sent. Any change in residence must be reported within three days to the Registrar’s Office. More complete information on the residence law and regulations can be obtained from the Registrar’s Office.

Academic Information

Registration

Specific information regarding registration is given in The Wichita State University Schedule of Courses published each semester and Summer Session. Students may not register after the first week of classes.

Falsification of information or withholding information pertinent to the records of the University is grounds for dismissal.

Classification of Students

Students are classified according to the following scheme:

- Freshmen: less than 30 semester hours earned
- Sophomores: 30 to 59 semester hours earned
- Juniors: 60 to 89 semester hours earned
- Seniors: 90 semester hours or more earned

As a general rule, a student taking 12 hours during the fall or spring semester is considered a full-time student. For graduate students, nine graduate credit hours are considered a full load. (Graduate students who have half-time teaching assistants are considered full time if they take six or more hours. Graduate students taking all or a majority of courses which carry undergraduate credit must meet the 12-hour requirement to be certified as full-time students.)

During the Summer Session, six hours are full time for both undergraduate and graduate students, with graduate teaching assistants full time with three hours.

In order to graduate with a bachelor’s degree in eight semesters, a student must take an average of 16 credit hours per semester.

Meaning of Course Numbers

Courses numbered 99 or below do not count toward a bachelor’s degree program.

Courses numbered 100 to 299 are designed primarily for freshmen and sophomores, but students from other classes may be admitted for lower-division credit. Graduate students may not take these courses for graduate credit.

Courses numbered 300 to 499 are taught primarily to juniors and seniors. Freshmen and sophomores may also be admitted if they satisfy the course prerequisites given in The Wichita State University Catalog. Graduate students may not take these courses for graduate credit.

Courses numbered 500 to 699 are aimed primarily at juniors and seniors, but graduate students may also receive graduate credit for these courses.

Courses numbered 700 to 799 are structured primarily for graduate students, but upper-division undergraduate students may be admitted if they meet course prerequisites.

Courses numbered 800 to 999 are designed for graduate students only and no students may be admitted to these courses unless they have been admitted to the Graduate School. (See the Catalog section on graduate credit for seniors for special conditions under which seniors may be admitted to graduate courses.)

Credit/No Credit Courses

Courses numbered below 100 do not carry credit toward a Wichita State degree and are graded Cr/NCr. All credit hours in such courses are parenthesized on the student’s transcript and the credit hours are excluded from credit toward graduation. Such courses are excluded from the calculation of the grade point average.

In addition, certain credit courses are graded only Cr/NCr. Any department in the University may offer courses on a Cr/NCr basis. This designation is included in the course description of such courses in The Wichita State University Catalog.

If students withdraw from a Cr/NCr course before the end of the tenth week of the semester (or the fifth week of the eight-week Summer Session), a grade of 'W' is recorded. If they withdraw from such a course after the tenth week of a semester (fifth week of the eight-week Summer Session), they receive a grade of 'NCr,' subject to the right of petition to the University’s Committee on Admissions and Exceptions.

Cr/NCr may also be granted to a freshman for the first semester of work during the transition semester, as discussed in the Transition Semester section of the Catalog.

Transfer of Credits

Within the University

From University College. Students are normally expected to transfer from University College to one of the six undergraduate degree-granting colleges at the end of the semester in which they earn their 24th credit hour. For a complete explanation of the transfer process, see the University College section of the Catalog.

Other Transfers Within the University. Students may transfer from any undergraduate degree-granting college to another provided they meet, as a mini-
mum, the admission requirements of the second college. Since some departments have space problems, they are forced to impose some limitations on the number of transfer students they accept. Such limitations must be approved by the dean of the college concerned and the executive vice president for academic affairs.

For specific information about probation standards and admission requirements of individual degree-granting colleges, refer to the individual college sections of the Catalog.

Examinations
The examination policy in each course is established by the department and the faculty of record and will be outlined with the course requirements. Reexaminations shall be permitted only with the consent of the faculty when reexamination is deemed to contribute to the academic objectives of the course.

Students cannot be required to take more than two final examinations per day. Arrangements for rescheduling the examination must be made by the student prior to the scheduled examination. Special examinations, when requested, will be given only with the consent of the dean of the college involved. Disabled students should contact the Director of the Resource Center for Independence for assistance with special examinations.

Students who miss an assigned examination should arrange with their instructor to take a make-up examination. Deans of the college will serve as arbitrators only when deemed necessary.

Auditor
Students are permitted in credit courses on a noncredit basis with appropriate approval under an auditor classification. To be enrolled as auditors, students must enroll in the same manner and pay the same fees as for credit courses at the University. Auditors may take advantage of the same privileges of class participation and instructor evaluation afforded students enrolled for credit.

Cr Credit (A, B or C). Used only in the transition semester and for courses defined as Cr/NCr in the Catalog. Credit given; no credit points. See the Catalog section on credit/no credit courses.

Ncr No Credit (D or F). Used only in the transition semester and for courses defined as Cr/Ncr in the Catalog. No credit given; no credit points. See the Catalog section on credit/no credit courses.

S Satisfactory (A, B or C). Credit given; no credit points assigned.

U Unsatisfactory (D or F). No credit given; no credit points assigned.

I Incomplete. Temporarily recorded as a grade when a student is granted an extension of time to complete course work. Credit is postponed and the course is not included in the student's grade point average until it is completed and a regular letter grade is assigned. An incomplete course must be satisfactorily completed by the end of the next semester in which the student enrolls, summer excluded, or the I reverts automatically to an F. Students may not enroll in the course in which they received the I unless they do not enroll at WSU for one calendar year.

The following conditions govern incompletes:
1. If students do not enroll at Wichita State within one calendar year following an incomplete and if their work is not completed within that calendar year, they must enroll in that course as a repeat during their next semester of enrollment or the grade will be changed to F. If they do enroll in the course again, the I is changed to W and the grade earned during the repeat semester becomes the grade of record. (If the course is not offered when they resume academic work, they must request that an exception be made by the chairperson of the department offering the course. The department chairperson may authorize a substitute course, postpone action for a semester or authorize a grade of W.)
2. If students receive an incomplete on the third enrollment in the same course, they may not enroll in the course again (enrollment becomes subject to the regulations concerning the repeating of courses).
3. Incompletes are not counted when computing grade point average.
4. When students receive a grade of incomplete, they are informed of the policies and procedures governing the removal of incompletes.

R Repeat. A prefix to other grading symbols indicating that the course is a repeat of one taken earlier, such as RA, RB, RC, RD, RF, RW or RI. The R prefix has no evaluative function but is used for information only.

The following provisions concern repeats:
1. No course may be attempted more than three times. For this policy a repeat of an audit does not count as an enrollment, but a W counts as an enrollment. Exceptions may be made in writing by the chairperson of a student's major department.
2. Any course may be repeated. Beginning on June 1, 1987, for students first enrolling at a college or university on or after that date, all grades will be included in the computation of the grade point average. The previous repeat policy will apply to former students.
3. Students may audit the same course any number of times.

CrE Credit by examination or by credentials in lieu of formal enrollment in college course work. The symbol CrE is used for College Board Advanced Placement (AP) credit, for College-Level Examination Pro-
gram (CLEP) credit, for course credit awarded on the basis of the American College Test (ACT), for credit by departmental examination and for credit by credentials (military and similar background). Credit given; no credit points.

Courses may not be changed from one status to another—for example, graded to audit—after the enrollment period (through the drop/add week), except through petition to the University’s Committee on Admissions and Exceptions.

Other special terms are used in reference to grading, as described below.

Grade Point Average (GPA). The grade point average (also called grade point index) is computed by dividing the total number of credit points by the total number of semester hours completed for which regular letter grades (A, B, C, D and F) are assigned. The grades Au, W, I, Cr, NCr, S, U, and CrE are always excluded from grade point average computations.

Credit Points. For each hour of work the student takes, credit points are assigned to regular letter grades (A, B, C, D and F) to permit averaging of grades: A=4, B=3, C=2, D=1, and F=0.

Course Attempted. An attempted course indicates that the student has enrolled officially in the course and that the student may have completed the course, been granted an incomplete or withdrawal. Attempts include courses receiving the grades A, B, C, D, F, W, Cr, NCr, S, U, and I but exclude Au and CrE.

Course Completed. A completed course is a course in which a letter grade of A, B, C, D, F, Cr, NCr, S, or U has been assigned.

Credit Hours Earned. Credit hours earned means that credit is given (A, B, C, D, F, Cr, NCr, S, or CrE). No student may earn hours of credit for any one course more than once, unless the description in The Wichita State University Catalog specifically states that the course is repeatable for credit.

Change of Grades

Changes of grade due to errors in grading or reporting may be initiated by an instructor at any time during one calendar year following the assignment of the original grade. A grade change also may be initiated by the chairperson of the department that offered the course if, and only if, the instructor is not in residence. The approval of the dean of the college of the department concerned is needed to have the change in grade entered on the student's transcript. The dean must then notify the chairperson of the department concerned that the grade has been changed.

An instructor who wishes to request a change in a grade assigned more than one year earlier may petition the University's Committee on Admissions and Exceptions. If this committee approves a change in grade, the instructor, department chairperson, and dean concerned must be informed by the committee before its recommendation is transmitted to the Registrar's Office and the grade change entered on the student's transcript.

This change of grade policy does not affect the right of the student to appeal to the Court of Student Academic Appeals. However, the court will ordinarily not hear cases involving grades assigned more than one year prior to the time of appeal.

In cases where failing grades have been recorded because a student was unable to withdraw formally, the student may petition the dean of the college for a retroactive withdrawal from all courses in the semester in question. The student must provide verifiable evidence of the causes for failing to withdraw properly. If the petition is granted, the grades are changed to W through the usual withdrawal procedure.

If a student requests a change more than a year after the original grades were posted, the student's petition must also be approved by the University's Committee on Admissions and Exceptions. The policy applies to all courses in a semester and can be invoked only for The Wichita State University courses. It may not be applied after graduation to courses attempted prior to graduation.

Transition Semester

To accommodate students in their adjustment to college standards, they may be eligible for a special transition semester. The transition semester is a student's first regular semester at Wichita State regardless of the number of hours attempted (Summer Session excluded). However, students who have enrolled at another institution of higher learning in a regular term (summer term excluded) before enrolling at Wichita State are not entitled to a transition semester at the University.

When students receive their grade reports (A, B, C, D, or F) and if they have below a 2.000 GPA, they may file a request with the dean of University College that all work in the transition semester be translated into Credit/No Credit (Cr/NCr) on their official records, with Cr applying to letter grades A, B and C, and NCr applying to letter grades D and F.

To have letter grades translated into Cr/NCr, the Transition Semester Request Form must be filed by the student with the dean of University College, between the posting of the semester grades and the student's next enrollment, including Summer Session. Students who file for transition semester will be placed on probation and will be required to meet the following criteria:

1. Students are limited to a maximum of 12 semester hours (or a proportional enrollment during Summer Session) or less during their next enrollment period.

2. Students must complete at least six (6) graded hours during their next enrollment (excluding Summer Session) before eligibility will be reviewed. This does not include enrollment in courses taken for Credit, Audit, or Satisfactory.

3. Students must receive at least a 2.000 GPA.

Students who fail to meet these requirements will not be awarded transition semester and will be subject to the appropriate probation or dismissal standards.

Credit by Examination

Advanced standing credit may be obtained by examination. The credit-by-examination program at Wichita State is designed to enable those who have achieved college-level education through independent study, correspondence, television instruction, past experience, or other traditional or nontraditional means to demonstrate their level of achievement. The test results may be used to gain college credit in undergraduate courses. Credit by examination will not be awarded for duplication of credit or to replace course grades. Students should check with their academic advisor before attempting any test. There are four means by which such credit may be earned:

1. Credit may be earned through an Advanced Placement (AP) examination administered by the College Entrance Examination Board (CEEB) through the student's high school. The AP program is administered by CEEB in cooperation with participating high schools. The tests are graded under the supervision of CEEB and the scores, which range from a high of five to a low of one, are sent to the college or university chosen by the student. Credit by AP examination is awarded at Wichita State in the areas of biological sciences, chemistry, English, French,
German, history, Latin, mathematics, physics, Russian, and Spanish. Under the AP program, credit at Wichita State is granted for specific courses. The titles of the specific courses for which credit is granted and the scores necessary for such credit are available from the Wichita State admissions office.

2. Credit may be earned by examination through the College Board’s College-Level Examination Program (CLEP). CLEP examinations are administered through the Wichita State Counseling and Testing Center. General CLEP examinations are intended for entering freshmen; a student with divisional credit will not receive additional hours by taking general CLEP examinations. Information about the dates and times at which CLEP examinations are given is available from the Counseling and Testing Center.

3. Credit for certain specified general education courses may be earned through examinations administered by the Wichita State Counseling and Testing Center. Information concerning the specific courses for which these tests are available and the standards applied in granting credit are available from the Counseling and Testing Center.

4. Individuals admitted to Wichita State may earn credit by departmental examination. In general, students may earn credit by examination for any undergraduate course not covered in the areas given above. Students should apply directly to the chairperson of the department offering the course and consult with the Counseling and Testing Center before taking the exam. The chairperson will make the examination available, unless the course has been exempted from credit by examination by the University’s Academic Standards and Practices Committee. The chairperson will be responsible for ensuring that students are informed of the scope of the course, the text used and other relevant information.

Except for special departmental exams discussed in the next paragraph, the grade recorded for credit earned by examination is CrE and it is recorded on a student’s transcript after enrollment in the University. Students may not take a credit-by-examination test for credit in a course in which they have previously enrolled unless they received a W for the course. They may not retake any such examination. Students may not request an examination for course credit in a course for which they do not have the stated prerequisite credit. Credit earned by examination is treated exactly like that earned by class enrollment for internal purposes at Wichita State (class standing, completion of course prerequisites, college requirements, etc.). It is possible to show letter grades on the transcript for departmental credit by examination. If approval for letter grades is granted by the University’s Committee on Academic Standards and Practices. Approval is granted if the department demonstrates to the committee that the testing procedure for credit by examination is equivalent to the testing procedure in the corresponding credit class. The Committee on Academic Standards and Practices asks for periodic review of this testing procedure. For example, the number of hours of testing through the credit class and the credit examination should be approximately the same, and laboratory courses need to include laboratory experiences as a part of the credit examination. When letter grades are awarded for credit by examination, a notation identifying the credit as credit by examination will be included on the transcript along with a statement explaining that credit earned by examination represents equivalency with the examination experience and performance for the regularly graded course. When students take credit by examination for letter grades, the following additional policies apply:

a. Students are allowed to withdraw from any credit-by-examination test at any time prior to its evaluation. Prior to taking the exam, students must be informed of the option not to submit the exam for the recording of a grade. Once the exam is graded by the instructor, the grade earned is recorded on the transcript.

b. If the department has received approval of the University’s Committee on Academic Standards and Practices to assign letter grades for departmental examinations and if the department has prepared separate tests for CrE and graded credit, students must select which test they want to take. If the department has prepared only the examination for graded credit, students have the option to have their test evaluated either for graded credit or CrE credit, provided that the choice is declared to the department before the test is taken. Fees are assessed to cover the costs of administering examinations and must be paid before the examinations are taken. A schedule of fees for the various examinations is available from the Counseling and Testing Center.

All credit by examination is subject to University policies and will be reviewed by the Registrar before being placed on the transcript.

Credit awarded by examination is determined by the department offering the course in consultation with the University’s Committee on Academic Standards and Practices. In the case of credit earned by departmental examination, the department has sole jurisdiction. Credit by examination from all accredited institutions of higher education is evaluated in the same manner as regularly graded course work from these institutions. The credit awarded is adjusted to the credit-by-examination policies of Wichita State. Every attempt is made to ensure that credit by examination applies to both a student’s degree program and University requirements for graduation. However, in no case may a transfer student receive more credit than that available to students at Wichita State.

Exemptions for Superior Achievement

Students who have completed a minimum of 12 hours at Wichita State and have a cumulative grade point average of at least 3.250 and a grade point average of at least 3.00 the previous semester may be granted several privileges:

1. They may be exempt from regulations governing the maximum number of hours allowed students during a semester.

2. They may also be exempt from college regulations, if any, governing the maximum number of hours students may take during a semester in one department. However, no student shall enroll in more than 21 hours without the permission of their college dean.

3. They may have permission to have course prerequisites waived with the consent of the instructor of the course and the head of the department in which the course is taken.

Graduate Credit for Seniors (Senior Rule)

Seniors at The Wichita State University or neighboring bachelor's degree-granting institutions who have an overall grade point average of 3.00 or above in their major field and in upper-division courses and who are within ten hours of completing the bachelor's degree may take work for graduate credit under the
Senior Rule. This work must go beyond the requirements for the undergraduate degree and the degree must be completed within the semester in which a student takes the graduate courses. Students also must be admitted to the Graduate School. Application for the Senior Rule is made to the Graduate School and must be approved by a student’s major adviser, chairperson for the department in which the course is taken, undergraduate dean, and the dean of the Graduate School before any courses can be taken for graduate credit.

Emory Lindquist Honors Program

The Emory Lindquist Honors Program provides an enriched university experience to outstanding students. It is intended for students who are well-motivated and who have demonstrated the ability to learn. The program offers honors colloquia and honors sections of regularly-scheduled courses. Each course is limited to 25 students. It also extends opportunities for independent study and an honors option. The latter enables honors students to receive honors credit in any upper-division course.

The program’s philosophical aim is to promote academic excellence at the undergraduate level by means of information, counseling, independent research, and small-group instruction under the leadership of senior career faculty. It is a community of potential scholars.

Broad program policy is established by the Faculty Honors Committee, including the honors program director, and is subject to approval of the executive vice president for academic affairs. The honors director, in conjunction with the student-led Honors Executive Council, makes policy recommendations and sponsors student activities. The director is selected from the ranked professoriat for a three-year term.

Freshmen are admitted to the program if their composite score on the Enhanced American College Test is at least 26 or if their high school grade point average is at least 3.500 as certified by the University. Transfer and incumbent students may enter the program if they have achieved a minimum grade point average of 3.250 over at least 30 credit hours at the University. Any student meeting these last two conditions, but who has not entered the program, may enroll in an honors course upon approval by the honors director.

Effective Fall 1989, new students wishing to participate in the Emory Lindquist Honors Program will be required to maintain a minimum grade point average of 3.250 and make regular progress toward completion of 21 hours of honors credit in at least two different departments: specific information about this regular progress requirement should be obtained from the program office. Program requirements include: at least nine of the 21 hours must be in upper-division (300-level and above) course work; five of the honors courses selected must be honors sections (as opposed to honors-options or independent study); and at least two of these regular honors courses should be upper-division courses. Graduate 700-level courses (excluding workshops) may be taken in place of regular upper-division honors courses. Appropriate 600-level courses may also count toward this requirement, subject to the director’s approval. Students enrolled in programs which severely restrict elective hour may petition the director to substitute honors-option courses for regular upper-division honors courses. A written statement of benefits and requirements is available from the program office, 218 Liberal Arts and Sciences Building.

Periodic offering of specific honors courses is determined by the Faculty Honors Committee pending their evaluation of proposed content and faculty. Students may receive academic credit a maximum of two times in each of the following courses.

Lower-Division Courses

103. Special Studies in Natural Sciences and Mathematics. (1-4).
201. Proseminar in Humanities and the Fine Arts. (1-4).
203. Proseminar in Natural Sciences and Mathematics. (1-4).

Upper-Division Courses

301. Colloquium in Humanities and the Fine Arts. (1-4).
303. Colloquium in Natural Sciences and Mathematics. (1-4).
310. Honors Tutorial. (1). Repeatable to a maximum of three hours of credit.
400. Honors Seminar. (1-4).
410. Independent Study. (1-4). Repeatable to a maximum of six hours of credit.
420Q. Seminar in Humanities and Fine Arts. (1-4).
440Q. Seminar in Natural Sciences and Mathematics. (1-4).

Honors Mentor Program

Much of the excitement of college learning comes through informal discussions with faculty and other students. Honors 310. Honors Tutorial: Selected Readings offers just such an opportunity. This course features informal discussions between groups of five or six students and a faculty mentor. While four or five books are read and discussed during the semester, the primary purpose of the course is to personalize the educational experience and give students an opportunity to talk about other education concerns they may have.

Independent Study Leading to a Degree with Departmental Honors

Outstanding students may enroll in their junior or senior years in independent study which leads to a degree with departmental honors if the work is satisfactorily completed. Students with junior standing and a cumulative grade point average of 3.250 are eligible to conduct a project in their major field of study. Students considering such projects are encouraged to begin planning their work well in advance of the semester during which the work is to be done. In order to enroll, students must consult with the honors director and obtain the approval of the instructor in their major department who will be their adviser. Applications must then be approved by the chairperson of the student’s major department and by the dean of the student’s college. The completed application must be filed with the honors director no later than the close of the preregistration period for the student’s last semester at Wichita State or the semester during which the student desires credit for the work, whichever comes earlier.

An independent study project should consist of original research or creative work. To be graduated with departmental-
tal honors, students must complete their independent study project and write the results according to specifications established by the honors director. Students must be examined on their project and other aspects of their major field of study. A three-member faculty committee conducts the examination and determines the student's eligibility for graduation with departmental honors. Students failing to secure such a degree either because of failure to complete their projects or failure in the examination will receive academic credit toward the regular degree for the credit hours completed, with the grade determined by the instructor under whom the work was performed. In no case may any student receive more than six hours of credit for independent study.

Academic Recognition

In all colleges, honors criteria are established for Wichita State students by the University and apply equally to all students, whether or not they are in the Emory Lindquist Honors Program. All honors are based on WSU grade point average.

The Dean's Honor Roll is published each semester and is composed of students enrolled in 12 or more semester hours of graded work who achieve a grade point average of 3.500 or higher for the semester.

Students enrolled in six through eleven hours of graded work per semester who achieve a grade point average of 3.500 or higher will receive Academic Commendation. The list of such students will be published each semester.

Degrees are conferred with distinction upon students who have shown excellence in scholarship. The minimum standard for graduating summa cum laude is a grade point average of 3.900 on Wichita State course work. The minimum standard for graduating magna cum laude is a grade point average of 3.550 on Wichita State course work. The minimum standard for graduating cum laude is a grade point average of 3.250 on Wichita State course work.

Each spring outstanding students are recognized in a congratulatory list published by the University. Graduating seniors are honored if they have a cumulative WSU grade point average of 3.250 or higher and class honors are awarded to students who have completed a minimum of 12 hours of graded course work at Wichita State with a cumulative WSU grade point average of 3.750 or higher.

Withdrawal

Voluntary Withdrawal

Students encountering special problems during a semester may protect their record through voluntary academic withdrawal based on the following procedures.

Students may withdraw voluntarily from any or all courses through the tenth week of a semester or the fifth week of the eight-week Summer Session and have a W recorded for the course(s).

After the tenth week of a semester or the fifth week of the eight-week Summer Session, students may withdraw from one or more courses with a W only if they petition the dean of their college and if the University's Committee on Admissions and Exceptions approves their petition. (The alternative to a W is an F.)

When students wish to withdraw, they must consult an advisor, obtain drop slip(s) for every course (line number), and have their advisor sign in the appropriate place. They must then take the drop slip(s) to the instructor of each dropped course and obtain the instructor's signature. After receiving the instructor's signature for each dropped course, students must take the drop slip(s) to the office of the dean of the appropriate college for the dean's signature and formal approval. The completed drop slip(s) must then be taken to the Registrar's office in Jardine Hall. Refund, if any, will be made according to the schedule published in The Wichita State University Schedule of Courses.

Complete withdrawal from Wichita State must be made in writing to the dean's office of the appropriate college.

Administrative Withdrawal

Administrative withdrawal may be initiated by the dean's office of the college in which a student is enrolled, the business office, Division of Student Affairs, or other appropriate University offices for the following reasons:

1. The student's class attendance is so poor that in the instructor's opinion full benefit cannot be derived from the course.
2. A University College student fails to be accepted by a degree-granting college by the time of completion of 48 credit hours.
3. The student fails to complete successfully all prerequisites for those courses in which the student is enrolled.
4. The student violates the provisions of the student's responsibilities statements in the University Catalog. (See the Student Responsibility section of the Catalog.)
5. The student does not comply with the terms of a provisional admission.
6. The student has unmet financial obligations to the University.

The office initiating administrative withdrawal will notify the dean of the college in which the student is enrolled when withdrawal proceedings are initiated. The student is then notified by the dean's office that he or she may be withdrawn administratively so that the student may explain his or her position before final action is taken. If official notices from the dean's office are ignored or returned because the address given by the student at the time of enrollment is incorrect, administrative withdrawal will take place 15 days after the initial notice. A grade of W or F will be officially recorded on the student's permanent record for a course or courses from which the student is administratively withdrawn. The grade of F will be recorded only if the administrative withdrawal is for academic reasons.

Academic Progress Reports

Reports on a student's progress are given in several ways.

Midterm Down Reports. At midsemester, a Down Report may be sent to students doing below average work, and to their academic advisor, as an indication that their grades need to be improved. Students should meet with their instructor and/or college advisor to discuss the problem.

Absence Letters. Faculty members who make regular attendance checks may inform the dean of a student's college when the student is absent excessively. The dean may either process an administrative withdrawal or request that the student initiate an official withdrawal or make arrangements with the instructor to complete the course. Students failing to take either course of action will receive an F at the end of the semester.

Informal Warning. Students with an overall grade point average above the level required by their college for graduation (or above 2.000 for University College) but below this level for one semester may receive a letter from the dean of their college warning of the consequences of continued substandard performance. Such warnings do not appear on a student's transcript.
Academic Probation and Dismissal Standards

Specific regulations governing probation and dismissal standards are established by each college at Wichita State and are given in the introductory statements in the individual college and the University College sections of the Catalog. Students should consult the appropriate section of the Catalog for these standards.

Since 2.000 (a grade of C) is the minimum grade point average required for graduation from Wichita State, students are formally placed (or continued) on probation at the conclusion of every semester in which their overall WSU grade point average falls below 2.000, except as noted below. If the college in which students are enrolled has a higher graduation requirement, students may be placed on probation whenever their WSU grade point average falls below the college's specified level.

Students admitted in good standing will be placed on probation when they have attempted six hours and their WSU grade point average falls below 2.000. Attempted hours are defined as all hours appearing on the transcript with a grade of A, B, C, D, F, W, Cr, NCr, I, S, or U.

Transfer students admitted on probation must complete at least 12 semester hours at Wichita State with a 2.000 average before probation may be removed. A student on academic probation is limited to a maximum of 12 semester hours in the fall and spring semesters.

Dismissal standards are set by the various colleges and by University College of Wichita State in conformance with the following policy.

Students will not be dismissed if either their WSU grade point average or their last semester's grade point average equals the minimum graduation level of their college. They will remain on probation as long as their WSU grade point average is below the minimum University or college graduation standard and their semester grade point average meets the minimum college or division standard.

Students will be dismissed at the end of the semester in which they accumulate 12 attempted credit hours with a semester and WSU grade point average below the minimum required after being placed on probation. Students are not academically dismissed at the end of a semester unless they began that semester on academic probation.

Dismissal from a college because of poor academic performance constitutes dismissal from the University. Nonetheless, a student whose grade point average qualifies him or her for admission to another college may apply to the Committee on Admissions and Exceptions of that college.

Court of Student Academic Appeals

The faculty at Wichita State has established a procedure to resolve disputes arising out of the classroom through the Court of Student Academic Appeals. The court hears appeals from students who feel they have been treated unfairly in grading or in an instructor's charges of plagiarism, cheating, or similar offenses. The court is designed to help resolve differences that cannot be settled in the framework of the student-faculty relationship and offers an important safeguard for students.

Any student may use the appeal procedure. Forms are available in the Division of Student Affairs, 103 Grace Wilkie Hall. The general procedure is explained to students when they pick up the form.

Requirements for Graduation

The University's minimum graduation requirements are given below. Students should consult the appropriate section of the Catalog for additional graduation requirements imposed by the department and college of their major.

Seniors are required to file an Application for Degree card in the office of the dean of their college at least two semesters before their expected date of graduation.

Students must have credit for 124 acceptable semester hours toward their degree. Hours of credit earned toward a degree do not include courses with grades of E, W, Au, NCR, or I.

Students must maintain an overall grade point average of 2.000 and a grade point average of 2.000 on all work taken toward a degree at Wichita State. Furthermore, students must maintain a grade point average of 2.000 in the courses in their major field of study.

Students shall not be allowed credit toward graduation for D grade work in excess of one-quarter of their total hours.

Students must have a minimum of 40 semester hours of credit in courses numbered 300 or above.

Students transferring from a two-year college must complete at least 60 hours of four-year college work and 40 hours of upper-division work in order to qualify for graduation from Wichita State.

At least 30 semester hours of course credit (A, B, C, D, or Cr) must be earned at Wichita State. Also, at least 24 of the last 30 semester hours or 50 of the last 60 semester hours must be completed at Wichita State. Exception to this regulation may be made by the University's Committee on Admissions and Exceptions.

Students may transfer credits earned in correspondence or extension courses with the approval of their dean. However, no more than 30 semester hours of such credit may apply toward a bachelor's degree and no more than six hours of such credit may be among the last 30 semester hours.

General Education Program

The General Education Program seeks to provide each student with a body of knowledge that is both a broad foundation for his or her major field of study, and also the beginning of what is necessary to become a genuinely educated man or woman. To achieve these purposes, the program combines required courses in composition, communication, and mathematics with distribution courses in the various major areas of knowledge. These distribution courses are identified in the course catalog and schedule of courses as "Q" courses. There are also some special distribution courses designed specifically for students who might have no further encounters with a certain field of study. These general studies courses are designated in the catalog as "G" courses and students are required to take a minimum of nine hours of "G" courses. To assure the breadth of studies that is characteristic of an educated human being, the faculty requires students to select their distribution courses according to certain rules, which are stated below. The General Education Program is an opportunity for all students to grow in their knowledge and appreciation for the rich variety of human achievements in the arts, sciences, and humanities.

The program consists of 42 hours—12 hours of basic skills courses and 30 hours of distribution courses.

Students entering The Wichita State University during or after the fall semester of 1983 must fulfill the General Education Program requirements in partial fulfillment of the requirements for the bachelor's degree. Students entering the University prior to the fall semester of
1983 who receive a bachelor's degree from The Wichita State University under the catalog requirements of 1983 or later must fulfill the General Education Program requirements. (See Date of Catalog Requirements.)

Students transferring to The Wichita State University under the Transfer and Articulation Agreement of the Kansas Public Community Colleges and State Universities are considered to have met the requirements of The Wichita State University General Education Program. Community college graduates and transferring students not covered by the agreement are required to enroll in the prorated number of hours necessary to complete The Wichita State University General Education Program as determined by transcript evaluation. Included in these hours are a number of general studies courses prorated on the proportion of the 30-hour distribution requirement yet to be fulfilled, as shown in column three of the table below.

This table refers only to students with previous college credit and is not applicable to entering freshmen.

<table>
<thead>
<tr>
<th>No. of transfer hours accepted for distribution</th>
<th>No. of &quot;G&quot; hours required</th>
<th>Minimum No. of &quot;G&quot; hours to be included in column 2</th>
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<tr>
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<td>9</td>
</tr>
<tr>
<td>7-15</td>
<td>23-15</td>
<td>6</td>
</tr>
<tr>
<td>16-21</td>
<td>14-9</td>
<td>3</td>
</tr>
<tr>
<td>22-29</td>
<td>8-1</td>
<td>0</td>
</tr>
</tbody>
</table>

To complete the General Education Program each student must take:

I. Basic Skills (12 hours—must be completed with a grade of C or better.)
   A. English 101 and 102
   B. Communication 111
   C. Math. 111, 111, or 211; or another math course for which one of these courses is a prerequisite.

Students with deficiencies in the Basic Skills may be required to take background work or refresher courses.

II. Distribution Courses (30 hours)
   A. Distribution requirements may be satisfied only by courses designated by the letters "Q" or "G" following the course number in the Schedule of Courses. For a course to be considered a distribution course, it must have been designated by a "Q" or "G" during the semester in which the student was enrolled.
   B. Rules for Distribution Courses
      1. At least nine hours must be completed in three different departments in Division A (Humanities and Fine Arts). This excludes performance and studio courses, as well as basic language courses.

2. Division B—Social and Behavioral Sciences: administration of justice; anthropology; communication; communicative disorders and sciences; counseling, educational and school psychology; economics; finance/real estate/decision sciences; geography; gerontology; health care administration; management; marketing and small business; minority studies; physical education; political science; psychology; social work, and sociology.

3. Division C—Mathematics and Natural Sciences: anthropology; biological sciences; chemistry; computer science; engineering; geology; health science; mathematics; medical technology; nursing; and physics.

*Some departments offer courses in more than one division. See the individual course listings for specific divisional assignments.

General Studies Courses

General studies courses are designated by the letter "G" following the course number. They have been designed to provide students the knowledge necessary to develop informed understanding of areas outside of their own fields of specialization. The courses attempt to provide students information and concepts that promote awareness of both the achievement and the limits of knowledge in a given area.

Students transferring to The Wichita State University under the Transfer and Articulation Agreement of the Kansas Public Community Colleges and State Universities should see paragraph four under General Education Program.

General studies courses, taken to fulfill this specific portion of the General Education Program, also count as distribution courses. No course with a "G" designation may be used to fulfill both the requirements of the General Education Program and the student's declared major(s).

Distribution courses are assigned to divisions on the basis of content. Some departments offer courses in more than one division, but each distribution course counts in only one division. The divisional assignments of General Education courses are listed in the General Education Handbook and in a special section of each semester's Schedule of Courses.

1. Division A—Humanities and Fine Arts: American studies; art education; art foundation; art history; communication; dance; English; history; interdisciplinary liberal arts and science program; linguistics; modern and classical languages and literatures; musicology-composition; philosophy; religion; theatre; and women's studies.

2. Division B—Social and Behavioral Sciences: administration of justice; anthropology; communication; communicative disorders and sciences; counseling, educational and school psychology; economics; finance/real estate/decision sciences; geography; gerontology; health care administration; management; marketing and small business; minority studies; physical education; political science; psychology; social work, and sociology.

3. Division C—Mathematics and Natural Sciences: anthropology; biological sciences; chemistry; computer science; engineering; geology; health science; mathematics; medical technology; nursing; and physics.
By utilizing off-campus resources and Cooperative Education is an academic program for undergraduate and graduate students who wish to combine classroom studies with academically related paid employment. Cooperative Education places students both locally and nationally.

By utilizing off-campus resources and expertise, cooperative education places students in business, government, industry, health, and social agencies. Programs are individually designed, enabling students to work directly with professionals in their field while expanding upon knowledge learned in the classroom. Opportunities may occur for students to refine research methods, apply theories in actual field settings, work with advanced technology, and design original projects and research.

Students placed in cooperative programs must enroll in specially designated co-op courses and work with a faculty adviser from within the appropriate departments. Each placement is assessed by the faculty adviser for its potential to provide learning experience relevant to the student's professional and educational goals.

Academic credit may be earned through co-op placements as determined by the student's faculty adviser. During the work period, students are expected to meet project requirements assigned by their adviser. Academic credit generally counts toward University degree requirements.

Cooperative Education offers both full-time and part-time placements. Students who select the full-time option must alternate a semester of full-time enrollment in course work before entering a second full-time position. Alternating placements carry the status of full-time students and enjoy the accompanying privileges.

Students selecting the part-time option are required to carry a minimum of six hours of course work in addition to their co-op course. Students may enroll in part-time co-op positions during consecutive semesters so long as faculty sponsors determine that meaningful learning experiences exist.

Requirements for co-op participation vary within the different colleges and departments. Requirements for admission to the co-op program generally include completion of 24 credit hours and satisfactory academic standing. Interested students should contact the Cooperative

### Special Academic Areas

#### Cooperative Education Program

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Requirements for co-op participation vary within the different colleges and departments. Requirements for admission to the co-op program generally include completion of 24 credit hours and satisfactory academic standing. Interested students should contact the Cooperative
admission and schedule an interview with the appropriate co-op coordinator.

Division of Continuing Education

One of the four basic objectives of Wichita State is to provide continuing education opportunities for adults. The Division of Continuing Education’s programs and activities are directed toward meeting the higher education needs of adults throughout the Wichita area and the state. The primary functions of the division are to:

1. Provide, in cooperation with degree-granting colleges, courses, programs, and support services for faculty and students in off-campus locations
2. Develop and provide alternative information sources, registration procedures, and orientation programs for adult part-time students
3. Cooperate with business, industry, and the professions in providing specialized credit and noncredit classes and public service seminars
4. Provide planning and support services in the continuing education centers within the individual academic colleges
5. Organize and administer courses for nontraditional students designed to meet their unique time and location needs.

The instructional services of the University are extended through courses presented over WSU Cable 13, KMUW Radio, and commercial television stations; by Instructional Television Fixed Service (ITFS); and through live instruction in outreach locations.

6. Assist in the development of original presentations and coordinate the reception of teleconferences provided by the National University Teleconference Network and other educational teleconference producers
7. Coordinate adult scholarships and senior citizen services
8. Provide centralization of the records and reporting functions to the Kansas Board of Regents for University-wide, off-campus credit activities and all noncredit programs.

Graduate School

About 3,000 students at Wichita State are enrolled in the Graduate School. The Graduate School offers programs leading to master’s, specialist, and doctoral degrees. Master’s programs are offered in accounting, administration of justice, aerospace engineering, anthropology, art education, biological sciences, business administration, chemistry, communication, communicative disorders and sciences, computer science, counseling, creative writing, economics, educational administration and supervision, educational psychology, electrical engineering, elementary education, English, geology, gerontology, health science, history, industrial engineering, liberal studies, mathematics, mechanical engineering, music, music education, nursing, physical education, physical therapy, physics, political science, psychology, public administration, school psychology, science education, secondary education, sociology, Spanish, and studio arts. The Specialist in Education, a degree beyond the master’s level, is awarded in counseling, in educational administration and supervision, and in school psychology.

Doctoral programs are offered in applied mathematics; chemistry; communicative disorders and sciences; aerospace, electrical, industrial, and mechanical engineering; educational administration, and human factors psychology. A transfer arrangement with the University of Kansas allows substantial parts of doctoral programs in educational administration to be completed at Wichita State.

For complete information on the graduate programs see The Wichita State University Graduate Bulletin.

Summer Session

During its Summer Session—the largest in the state of Kansas—Wichita State continues its commitment to quality education. All of the University’s academic divisions operate during the Summer Session, and credit toward both graduate and undergraduate degrees may be earned. More than 300 faculty teach more than 1,000 regular and short courses; the standards of achievement are identical with those of the academic year. Credits earned in the Summer Session are accepted by all colleges accredited by or belonging to the associations that accredit the University.

Courses are offered in a variety of formats. A two-week pre-session precedes two four-week sessions which are concurrent with the regular eight-week session. Both day and evening classes are offered. For information regarding dates for the various sessions, dates of enrollment and course offerings, contact:

Director of the Summer Session
The Wichita State University
1845 Fairmount
Wichita, Kansas 67208-1595
(316) 689-3726

Admission and Enrollment

The rules governing admission to the Summer Session are the same as those for the regular academic year. (See the Admission to Wichita State section of the Catalog.) A general registration enrolls students just before the eight-week and first four-week sessions. Separate registrations also are held for each of the short sessions. Detailed information on registration is available in the Summer Session Schedule of Courses.

The fees for the Summer Session are the same as those for the regular academic year. (See the Financial Information section of the Catalog.)

Special Summer Programs

Workshops. Workshops devoted to current topics are offered throughout the summer. Typical courses include workshops for teachers in the areas of business, education, and fine arts; courses in current health issues; an entrepreneurship workshop for people considering creating a small business; and field study in topics such as the floral ecology of the Rocky Mountains, the Osage culture in Oklahoma, or a wilderness experience in a national park. A list of the workshops being offered each summer is included in the Summer Session Schedule of Courses. Special fees are charged for workshops. (See the Financial Information section of the Catalog.)

High School Students. High school students between their junior and senior years may enroll as guest students for college credit in many WSU classes. Other summer opportunities at Wichita State for high school students include sports camps in basketball, baseball and volleyball; a drum major and twirler camp; and enrichment courses for career exploration.

Study Abroad Programs. Wichita State offers organized study abroad programs in Mexico and France, described below. Additionally, students can individually study abroad for up to four hours of credit. For more information, contact the Office of International Programs, 303 Grace Wilkie Hall.

Exchange Program with the University of Orleans. Wichita State University has a special exchange program with Wichita's French sister city; Orleans. Through this exchange program, students pay their tuition and fees at WSU and do academic work in their chosen field at the Universite d'Orleans. Students receive direct credit at WSU for all credit earned at the
transcripts - $20 per student
$30 per student
practicing professionals - $10 per student
students - no charge

c. Analysis of out-of-state
a. Initial certification review for
b. Endorsement review for in-state

Band (Concert), Mus. P. 212B, 412B, and
Band (Symphony), Mus. P. 211B, 411B,
Wind Ensemble, Mus. P. 210B, 410B,
During the academic school year,
Jazz Arts Ensemble, Mus. P. 211T and
Orchestra, Mus. P. 211A, 411A, and

7. Physical education (CPR and first aid
5. Physical education (horsemanship)
6. Physical education (scuba diving)
8. Engineering equipment and mainte-

1. Students are required to reimburse
the University for the cost of excess
breakage, wastage of materials, and mate-
rials used in excess of those required to
complete a course.
2. Geology Field School-actual costs per
semester
3. Physical education (bowling) - $40
per semester
4. Physical education (bowling), PE
201B - $95 per course
5. Physical education (horsemanship) -
$75 per semester
6. Physical education (scuba diving) -
$75 per semester
7. Physical education (CPR and first aid
certification) - $1 per certification
8. Engineering equipment and mainte-
nance fee - $15 per credit hour for engi-
neering courses
9. College of Education Certification
Review and Transcript Analysis fee:
a. Initial certification review for
students - no charge
b. Endorsement review for in-state
practicing professionals - $10 per student
c. Analysis of out-of-state
transcripts - $20 per student
d. Analysis of foreign transcripts -
$30 per student

Free Music Courses
During the academic school year,
undergraduates enrolled in six or more
hours will not be charged tuition and fees
for the following ensembles:
Wind Ensemble, Mus. P. 210B, 410B,
and 710B
Orchestra, Mus. P. 211A, 411A, and
711A
Band (Symphony), Mus. P. 211B, 411B,
and 711B
Band (Concert), Mus. P. 212B, 412B,
and 712B
University Singers, Mus. P. 211F, 411F,
and 711F
Jazz Arts Ensemble, Mus. P. 211T and
212T, 411T and 412T, and 711T and 712T
A Capella Choir, Mus. P. 212F, 412F and 712F
Concert Chorale, Mus. P. 213F, 413F and 713F

Students enrolled in fewer than six hours will be charged regular tuition and student fees. Tuition and fees will not be charged to graduate students enrolled in the above courses. During Summer Session, tuition and fees for the above ensembles will not be charged to undegraduate or graduate students enrolled for two or more credit hours in courses other than the above.

**Heskett Center Program Fees (Nonstudents)**

<table>
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<th>Spouse of student</th>
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<th>Spring Summer</th>
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<tbody>
<tr>
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<td>$15</td>
</tr>
<tr>
<td>Other dependents</td>
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<td>$5</td>
</tr>
<tr>
<td>of student</td>
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<td></td>
</tr>
<tr>
<td>Faculty/staff</td>
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<td>$20</td>
</tr>
<tr>
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<tr>
<td>membership</td>
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<td>$10</td>
</tr>
<tr>
<td>Spouse of faculty/</td>
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<tr>
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<td></td>
</tr>
<tr>
<td>Other dependents</td>
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<td>$10</td>
</tr>
<tr>
<td>(s) of faculty/staff</td>
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<td></td>
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<tr>
<td>Family member rates:</td>
<td>$80**</td>
<td>$30</td>
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</tr>
<tr>
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<td>$40</td>
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<tr>
<td>dependent(s)</td>
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</table>

Faculty/staff who have not joined the Heskett Center may use the building for a daily fee of $5. They must present their current faculty/staff photo ID. This fee will not be applied to the purchase of faculty/staff membership.

*Full and/or spring WSU students not enrolled in Summer Session may purchase a summer pass for $10.

**10 off annual membership if purchase is paid in one installment.

Payment of the fee entitles the individual or family to use the facility and services during those hours specifically scheduled for each membership category and/or activity of interest. Hours will vary.

A payroll deduction plan is available for annual membership purchases only. Discounts do not apply if payroll deduction plan is selected. Annual membership must be purchased prior to October 1.

**Special Fees, Deposits, and Waivers**

Certain other fees are assessed as indicated below:

**Scholarship search fee:**

| Currently enrolled students | $10/person | Non-WSU student | $15/person | Undergraduate admission application fee, initial enrollment | $15.00/person |

**Media course fee**

| $8.00/credit hour |

**English composition or mathematics placement fee**

| $4.00/person |

**Reserving of class fee**

| $30.00/person |

**Diploma replacement fee**

| $10.00/copy |

**Identification card fee**

| $6.00/person |

**International student application processing fee**

| $40.00/person |

**Orientation fee**

- Transfer student: $20.00/person
- New freshman student: $25.00/person
- Transcript and certification fee: $3.00/copy
- Public documents per copy charge: $0.10/copy
- Late registration fee
  - Through 20th day: $10.00/registration
  - After 20th day: $25.00/registration
- Library fines and lost materials—cost per fine schedule or cost of replacement of material plus a processing fee
- Returned check fee: $15.00/check
- Testing and credit by examination fee:
  - Experiential learning assessment fee: $25.00/person
  - Departmental examination fee: $8.00/credit hour
- Instrument use fee: $15.00/semester
- Career placement registration fee:
  - Seniors: $10.00/person
  - Nonstudents: $25.00/person
- Equivalency examination fee: $8.00/credit hour
- College of Health Professions application fee: $15.00/person
- Acceptance fees:
  - Emergency medical technician*: $25.00/person
  - Dental hygiene*: $100.00/person
  - Medical technology*: $100.00/person
  - Nursing*: $100.00/person
  - Physical therapy*: $100.00/person
  - Physician assistant*: $100.00/person
  - Respiratory therapy*: $100.00/person

When an approved change of schedule involves both the dropping and adding of courses, the tuition and student fees already paid for the dropped courses will apply to the tuition and student fees for the courses being added. A $10 drop fee will be assessed during the first five weeks of a semester (two weeks of summer school) for all drop/add transactions submitted at the same time. No fee will be assessed for adding courses.

**Refund Policy—Complete and Partial Withdrawal**

Students making a complete or partial withdrawal during the first two weeks of a semester (first week in the eight-week Summer Session) are entitled to an 80 percent refund of tuition and fees. Students making a complete or partial withdrawal during the third, fourth, and fifth weeks of a semester (second week in the eight-week Summer Session) are entitled to a 40 percent refund of tuition and fees. No refund is made to students who withdraw after the fifth week (second week in the eight-week Summer Session). All refunds are subject to a $10 drop fee.

Classes and credit workshops meeting for a period other than the regular academic term will refund 80 percent during the first 10 percent of class time, 40 percent during the next 20 percent of class time, and no refund thereafter. Refunds on noncredit workshops will be made only on cancellations received 48 hours prior to the time of the scheduled workshop.

To withdraw completely from the University, students must process drop cards for all classes in which they are enrolled.

**Fee Waiver Policy**

The dean of a student's college, or his or her designee, or the Registrar may authorize a waiver of special fees and/or non-refundable tuition fees in cases where the schedule change or withdrawal is required because of University regulations, clerical errors, misadvising, class schedules changed by the University, or other exceptional circumstances beyond the control of the student and determined valid by the college dean or his or her designee. The waiver petitioning procedure is as follows:

1. Students request a petition form from the dean's office of their college and provide the information requested on the form.
2. Students present the petition to their...
college dean's office for consideration. Graduate students petition the Graduate School dean's office.

3. Students are notified of the action taken on the petition.

4. Students submit approved petition to the Controller's office with their enrollment, schedule change, or withdrawal forms.

5. When students wish to appeal a negative decision on a petition, they call their college dean's office for information on how to file an appeal.

Senior Citizen Fee Waiver
In accordance with the Kansas Board of Regents' policy, students who are 60 years of age or older may enroll as auditors (noncredit) in any academic credit course in which space is available without paying tuition and fees. Senior citizens must present a Medicare card or driver's license to validate age. A special senior citizen registration is held after the first day of classes to ensure they have priority in obtaining space. Course prerequisites apply to senior citizens as well as other students.

Period of Payment
All semester fees, including laboratory fees, must be paid in full at registration.

Unpaid Fees
Students who leave The Wichita State University without meeting their financial obligations to the University may have their records impounded by the Registrar. Their transcripts or diplomas will not be issued unless their account is cleared and they may not enroll for a new term unless all fees are paid.

Assessment and Collection
The University controller assesses and collects the fees. The controller, the dean of the College of Fine Arts, and a faculty member from the W. Frank Barton School of Business constitute the Board of Appeals for students who believe their fees have been incorrectly assessed. The decision of this committee is final. Forms to initiate the process are available at the Registrar's office.

Student Housing Fees
Room and board rates at The Wichita State University vary with the choice of meal plan. Housing costs for the 1992-1993 school year are $3,035 for 19 meals per week, $2,975 for 15 meals per week, and $2,885 for 10 meals per week, paid monthly. Semester payment plans are slightly lower. Single rooms are available at an additional cost of $300 per semester to returning students only. These rates include furnished, air-conditioned rooms, local telephone service, and all utilities. In addition to the housing fees, a $35 nonrefundable application fee is assessed to each person applying for a room in the residence halls.

Rates are for fiscal year 1993. Fees may be changed by the Kansas Board of Regents.

Financial Assistance
Wichita State offers financial assistance through scholarships, employment and federally supported programs. Students interested in any type of financial assistance should contact the University Office of Student Financial Planning and Assistance, 223 Grace Wilkie Hall, to see what assistance is available for their specific needs. Most financial assistance is based on family need, but some scholarships are awarded without consideration of financial need. Scholarships. The Board of Trustees of the University, in cooperation with the Kansas Board of Regents, administers a large number of scholarships and loans coming from endowed property and funds of the University.

Employment. Students enrolled in at least three hours may be eligible for part-time employment at the University, with preference going to students with the greatest demonstrated financial need. Students may find employment in such positions as academic assistants, clerical workers, technical workers, custodial and food service workers, and library assistants.


The Office of Student Financial Planning and Assistance provides services to veterans and active duty people. The services span the entire range of benefits and include certification for benefits to the VA, tutorial assistance, financial assistance information, and work-study for veterans.

The Wichita State University is designated a Serviceman's Opportunity College.

Endowment Association
The Endowment Association of The Wichita State University is the appropriate channel for fund-raising at the University. The coordination of all fund-raising activities is conducted through the Endowment Association (Development Office) under the direction of the Executive Director of Development.

All investments and bookkeeping responsibilities with regard to gifts to the University are handled through the Endowment Association. A computerized system provides comprehensive recording of all gifts.

Endowed Chairs
The most prestigious manner in which to endow monies to The University is through an Endowed Chair. An Endowed Chair, named according to the wishes of the donor, may be established with an endowment of $500,000. The Endowed Chairs current to the University are:

- Barton Distinguished Chair in Business
- Barton School of Business
- Carney / Pizza Hut Chair in Aerospace Engineering
- R.P. Clinton Chair in Business Entrepreneurship
- Stephen L. Clark Endowed Chair in Real Estate and Land Use Management

Endowed Professorships and Fellowships
A University Professorship may cross disciplinary lines and is not restricted to a college or department. The income from such an endowment is used for support of a faculty position. A University Professorship, named according to the wishes of the donor, may be established with an endowment of $250,000.

A PhD Fellowship helps doctoral candidates to achieve their goals within a particular field. A fellowship is named according to the wishes of the donor and is established with an endowment of $120,000 or more.

The current University Endowed Professorships and Fellowships are:

- Allen, Gibbs and Houlik Faculty Fellowship in Accounting
- Barton School of Business Professorships and Fellowships
- Adele Davis Professorship of Humanities
- Geraldine Hammond Visiting Professorship of Humanistic Studies
- Hugo Wall Fellowship
Endowed Scholarships and Grants

The Wichita State University has been fortunate to receive donations submitted in the names of the following individuals. Many are past graduates, faculty, and administrators of the University who wish to assist future graduates in financing their years at The Wichita State University. The scholarships listed have a minimum principle of $2,500, are funded through the proceeds of the gifts from these individuals, and play a vital role in the University's attempt to meet the full needs of students requiring financial assistance.

Recipients must meet the specific requirements of the scholarships each semester. In addition, all recipients of designated scholarships must write an appropriate letter of acceptance to the donor.

Endowed scholarships and respective departments include:

- Ric Abbott, aerospace engineering
- Clark and Rowena Ahlberg, general
- AIFAM, athletics
- Fred and Mary Aley, business
- Robert Alley, education
- Alumni Awards, general
- Anderson Walk-On, athletics
- Archie G. and Gladys A. Anderson, education
- James E. Anderson, Sr., education
- Robert E. Anderson-Leonard M. Chaffee, education
- Anonymous, general
- Athletics Scholarship
- Jack Austin, business
- A.J. and Jean Bachas, general
- Loren Baker Memorial, entrepreneurship
- James Kerr Bandsman, music
- Bank IV, general
- W. Frank Barton, business
- W. Frank Barton, entrepreneurship
- Beech Employees Club, athletics
- Walter H. Beech, aerospace engineering
- Lloyd R. Bell Memorial, music
- Douglas Bendell, liberal arts
- Christopher Benn, medicine, science/engineering
- Big Brothers-Big Sisters of Sedgwick County, general
- Biological Science, biology
- Dr. Leslie Blake, speech
- John Blazek, WuShock
- Marguerite Bliss and Isabel Ford, liberal arts and sciences
- V. Jerry Blue, entrepreneurship
- Byron W. Boothe Memorial, entrepreneurship
- Luella Bosworth, English
- Merrill Bosworth, music
- Hazel Branch, biology
- Margaret F. Gillespie Brehm, general
- Sidney J. Brick, bowling
- Hazel and Edward R. Brooking, health
- War O. and Agnes Brooks, biology
- Josephine Brown, education
- J.W. and Hazel Brown Memorial, general
- Marvin G. Brown Football Memorial, general
- Judy Clark Delta Gamma, general
- Melba Cornwall Budge, piano
- Raymond LeClair Budge, art
- Charles M. Buess, chemistry/business
- Stephen Burnham Memorial, mechanical engineering
- Louisa Byington, liberal arts
- Marjorie Calkins Memorial, music
- Vincent Canzoneri, music
- James Caesar, music
- Van Dilla Chapell, general
- Anna V. and Robert V. Christian, chemistry
- Donald G. Christian Football Memorial, general
- Christmas Card Scholarship, general
- Harry E. Christopher Award, math
- James Chubb, economics
- Class of 1927, general
- Rick P. Clinton, business
- Flora Clough, English/literature
- Verda Colaw Memorial, engineering
- Daisy Stever and Lisle Stephan Congdon, general
- Sara Hyde Corbin, political science
- Jess Cornejo/Cornejo & Sons, operation success
- Lee Cornell, geology
- Wayne Coulson, prelaw
- Leland F. Cox, business
- Cramer Fund for Art, art
- Al Cress, German
- Laura McMullen Cross Honorary, liberal arts
- Curriculum & Instruction Faculty & Alumni, education
- Paul T. and Mary Jane Curry, entrepreneurship
- Harry Darby Foundation, general
- David Dearmore, athletics
- Constance Louise Routh Decker—Kansas Society Daughters of the American Revolution, general
- Urban Denker, real estate
- Department of Nursing Alumni/Faculty, health professions
- Cecil W. and Helen J. Dorman, business
- Walter J. Duerksen, music
- John W. Duren Football Memorial, general
- Betty Elliott, communication
- Paul V. Elliott, general
- Howard E. Ellis, music
- Virginia Murphy Engel Memorial, general
- English Teacher’s Endowed, education
- Gordon W. Evans Instrumental, music
- John L. Evans, premed
- Charles S. Everson, business
- Sid Faires Memorial, education
- Floyd M. Farmer, education
- Floyd Farmer, athletics
- Louise Findlay, music
- Martha Fleming, dance
- Flescher-McKinley, chemistry
- Helen Johnson Frank, general
- Howard Frazier Memorial, business
- Friends of Delta Upsilon, general
- Josephine Fugate, education
- Chalaine and Lynette Furley, liberal arts
- Glen Gardner, general
- Sam Gardner, golf
- Edith A. Garlock, health
- Morris and Mary Garvin, music
- Harold P. Gates Memorial, physician assistant program
- Paul H. Gerling Public Affairs Internship, political science
- Mabel Fay Gillespie, general
- R.L. Gillespie, general
- Kenneth and Nadine Gleason, education
- Jacob and Molly Glickman, general
- Golf Memorial, golf
- Harry Gore, general
- Henry and Helen Gott, music
- Harold and Eva Weiner Grafton, English
- Marie Graham, history
- Grand Army of the Republic, logopedics
- Charles and Helen Graves, general
- Carrie Halfman Memorial
- Benjamin F. Hammond, general
- Geraldine Hammond, liberal arts
- Eva C. Hangen Delta Gamma, general
- Herbert J. Hannam, education
- Donald R. Harbour, administration of justice
- Martin E. Harrison Football Memorial, general
- Larry Hartmann, music
- Mary Haymaker, English
- Allene Nelson Henderson, nursing
- Evelyn A. Hinton, general
- Arthur J. Hoare, mathematics
- Dr. Robert Holmer, education
- Richard H. Homburger Award for Excellence, business
- Myrrl Houck, general
- Angelika R. Howard, conversational languages
- Grace Howell, journalism
- Sam C. Hutchinson, liberal arts
- Earl R. Hutton, engineering
- Eunice Jones Isely, senior honor women
- Frank C. Isely, general
- William H. Isely, senior honor men
Vocal Performance Majors, music
David Wainwright Memorial, ROTC
Dwane and Velma Wallace, engineering
Hazel Walpole, athletics
Nestor R. Weigand and Hobart C. Brady, real estate
Wesley Foundation Women's Association, maternal/child nursing
Wesley Foundation Women's Association, nursing
Wichita Gem and Mineral Society, geology
Wichita Oil Secretaries Association, business
Annalaura Williamson, general
Fern Worden and Frederick Wieland, education
Grace Wilkie Women's Scholarship, general
J. Roscoe Williams, business
George Wilner, speech/drama
Ben and Helen Wilson Football Memorial, athletics
Mary Wittenbach, psychology
Women's Aeronautical Association, engineering
Frances O. Woodard, economics
Ira Dean and Dixie Worden, business
Jack R. and Barbara J. Worden, liberal arts
Mack W. and Grace M. Worden, liberal arts
Elmer and Mabel Worthington, music
Paul R. Wunsch, music

Other Endowments
To improve its fiscal stability, The Wichita State University has developed a permanent endowment fund invested to provide continuing income in support of various programs and activities of the University. The major portion affords financial assistance to students as directed by the donors. Other programs that have a $2,500 minimum principle amount are:

ACE Endowment Fund
Dr. and Mrs. Charles A. Adams Fairmount Fund for Faculty
Jackson P. Adams Endowed Book Fund
Troy F. Amsden Fund for Fine Arts
Bank IV President's Endowment
W. Frank Barton School of Business
Fairmount Endowment Fund
J.R. Berg Distinguished Petroleum Lectureship
Sam Bloomfield Distinguished Engineer in Residence
Melba Cornwell Budge Piano Pedagogy
College of Engineering Dean's Circle Equipment Fund
Corbin Family Library Fund
Sarah Hyde Corbin Library Fund
Shelley Lee Cox Fund, basketball

Business Heritage Series Fund
Butler-Ransom Fund for Religion
William and Rita Dyer Entrepreneurship Activities Fund
Dr. Carl Fahrbach Football ’70 Memorial Fund
Clifford W. and Leah E. Gaulter Fund for Health Professions
Margaret Alexander Glades Endowed Fairmount Faculty Fund
Keith Graham Endowed Professor Travel Award, education
Lyman G. Hardy Fund
Robert F. Hartscock Fund, liberal arts and sciences
Deborah G. Haynes Fairmount Fund for Faculty
Honor Five Fund
M. Alice Isely Memorial Book Fund
Randel M. Jones, fine arts
Paul Kitch Endowed Fund
Knight Foundation Fund
Kouri Paracourse
Library Associates Fund
Library Endowment Fund
Library Journal Acquisitions Fund
John Liggett Fund
Bianca Lightner Fund
M.A. Thesis Award
Delano Maggard Student Loan Fund
Xavier McDaniel Professional Development Fund for Minority Faculty
Thomas B. Meeker Memorial Fund
Midwest Research Fund
The Lewis and Selma Miller Fund for Fine Arts
William Miller Memorial Fund
Miro Acquisition/Restoration Fund, museum
Harrie S. Mueller
Lydia Newman Fund
Department of Nursing Fund for Library Acquisitions
PFF Fund
Lloyd Parker Fund
Christine F. Paulsen Fine Arts Fund
Jack G. Paulsen Athletic Fund
D. Cramer Reed Faculty Development Fund
Geney and Cramer Reed
Dr. Martin Reif Liberal Arts Enrichment Fund
Lee and Carolyn Riley Fund
DeLores, Elta and Sidney Rodenberg
Teaching Award
Ross Edgerton Library Fund
Anna M. Ryan Fund
James Schwartz Lecture Series
Sculpture Maintenance Fund
Seamans Memorial Library Fund
Special Collections, library
Summer Program in Entrepreneurship
Wesley Medical Center Fund in Health Professions

WSU Regents Fund
WSU Summer Theatre
George VanRiper Distinguished Speaker Series
Marjorie Wintrop Williams Fund

Student Affairs
Structure
The Vice President for Student Affairs and Dean of Students is responsible for the coordination and supervision of the Division of Student Affairs. Issues involving student life, development, programs, problems, and activities on The Wichita State University campus are addressed by the staff of the division.

The Office of Student Life and Services (Grace Wilkie Hall 105) is responsible for the residence halls, off-campus housing concerns, handicapped services, fraternities and sororities, student organizations and student involvement programs, the child development center, women's activities, international programs, placement and career services, student health, informed sources, counseling students with problems or concerns, and encouraging scholastic achievement.

The dean of University College is responsible for the programs and policies of University College. (See the University College section of the Catalog.)

An assistant vice president is responsible for Operation Success, Project Discovery, and Upward Bound, the federal TRIO programs for educationally disadvantaged students. (See the Special Programs section of the Catalog for a more complete description of these programs.)

Orientation
Special orientation programs are presented through small-group interaction and discussions. For more details about the orientation program, see the University College section of the Catalog.

Counseling and Testing
The Counseling and Testing Center provides psychological services and counseling for personal and career/life planning issues. Professional counseling is available on a cost-shared basis to all members of the University community—students, their families, faculty, and staff. Individual, couple, family, and group counseling are aspects of the professional counseling services. Testing services also are part of the center's function. The credit by exam program and the National Testing program are administered directly by the Counseling and Testing Center. The
National Testing program includes certification tests for community professionals, CLEP tests, and entrance exams for colleges and graduate schools.

Office of International Programs

International Programs, 303 Grace Wilkie Hall, serves the special needs of approximately 1,000 international students from more than 80 countries enrolled at Wichita State. (For international student admission requirements, see the Admission to Wichita State section of the Catalog). An orientation program specially designed for newly arriving foreign students prepares them for entrance into the American academic systems and way of life.

International Programs also sponsors the Friendship Family Program, the Global Education Program, and various other activities that promote interaction between American and foreign students.

In addition, the International Program houses a Study Abroad Center which provides information to American students on study, work, and travel opportunities abroad. Information concerning Fulbright-Hays grants may be obtained from this center.

Student Involvement Programs

The Office of Student Involvement Programs, located in 105 Grace Wilkie Hall (689-3022), exists to serve the needs of WSU's student organizations and individual students in the areas of leadership and involvement. The mission of the office is to encourage WSU students to become involved in campus life and community service and to provide WSU students with the skills and training necessary to become effective leaders. A combination of programs, services, and consultation are offered to accomplish this mission. Services and programs currently offered include a leadership library, student organization needs assessment, student involvement preference surveys, workshops and conferences on topics related to leadership, a student involvement and leadership speakers bureau, a student organization handbook, and an ongoing community service program. Additionally, personnel are available to provide specialized training and consultation to students and student organizations upon request. Many of these programs and services are delivered through the Leadership Council, which is made up of student volunteers with an interest in leadership and a commitment to helping their peers.

All students are encouraged to use the services and programs offered through this office where they can find "what they need to succeed."

Placement and Career Services

The Placement and Career Services office provides services to students and alumni/alumnae seeking career advice or employment-related assistance.

Individual career counseling is available to assist students and alumni/alumnae with planning and decision making. Assessment instruments, including SIGI (a computer guidance system) are offered for self-assessment. Workshops, presentations, and classroom instruction are offered to enable people to learn about the responsibilities of various career fields, to prepare job resumes and letters of application, to conduct effective employment interviews, and to make informed decisions.

Occupational and career information, employer directories, information on employment trends, employer recruiting literature, annual salary survey reports and information on graduate and professional school opportunities are available in the Career Resource Center.

Degree candidate and alumni/alumnae placement services include direct referral to career employment vacancies; on-campus interviews with employer representatives; and an employment listing bulletin.

Placement services also include part-time and summer employment opportunities.

Housing

On-campus housing is available to more than 600 students in two residence halls located on opposite sides of The Wichita State University campus. Housing options include an honors floor, graduate floor, quiet floors, single sex, and coed floors. Because research nationwide has repeatedly shown that freshmen who live on campus are more successful academically than freshmen who do not live on campus, and because this research has been reinforced by evaluation of students' performance at Wichita State, new freshmen are required to live in a University residence hall, unless exempted. All other students may select their own accommodations; however, University housing is highly recommended. The Wichita State University housing policy states:

- New freshmen who have graduated from high school within the past nine months must live in a University residence hall unless they are:
  1. Married
  2. Living with a parent or legal guardian
  3. Living with a grandparent, uncle or aunt

Special exceptions to these regulations will be reviewed by the housing officials in the Division of Student Affairs.

Admission to Wichita State does not mean automatic room reservation. Each student admitted will receive information concerning housing from the Office of Admissions and the proper forms must be filled in and returned to the housing office to reserve a room. Students are encouraged to apply early since space is limited.

Requests for information should be sent to:
Director of University Housing
The Wichita State University
1845 Fairmount
Wichita, Kansas 67208-1595

The Wichita State University reserves the right to make policy adjustments where the situation demands and to change the residence of any student or deny or cancel residence accommodations of any student in cases where such action is deemed desirable.

University Child Development Center

The University Child Development Center, located in a facility which opened in January 1991, is a licensed school for children of WSU students. Certified preschool teachers and part-time aides supervise activities which include art, language, music, science, numbers, and literature. The school is available from 7:30 a.m. to 5:30 p.m. Monday through Friday for children six weeks to six years old and 5 to 10 p.m. Monday through Thursday for children 2 1/2 to 12 years old. Each child must stay for a minimum of two hours per day. The program permits children to attend preschool while their parents are in class. It is available to the greater community as well.

Resource Center for Independence Serving Students with Disabilities

The Resource Center for Independence (RCI) provides supportive services for students who experience physical or mental disabilities. Students qualified for this service can receive a handbook of services by contacting the office:
Some auxiliary aids are available for students to use. Textbooks also can be recorded on tape when requested.

The RCI encourages students to be as independent as possible on campus and to use those services which help maximize learning. Meetings with the director or other staff are available Monday through Friday, 8 a.m.-5 p.m.

Student Health Services and Student Health Insurance

The Student Health Services in 209 Ahlberg Hall provides ambulatory health care for students with health concerns, medical problems, illnesses, and injuries. Clinic services and health education are provided by a staff of professional nurses and community physicians. The services of registered nurses and nurse practitioners are available during office hours and physicians may be seen by appointment during their scheduled clinic hours. Physicians specializing in ear, nose, and throat; dermatology; gynecology; internal medicine; orthopedics; surgery; and family practice are available.

Special services of immunizations, anonymous HIV testing, tuberculin skin testing, family planning information, physical examinations required by academic programs, nutrition and diet counseling, and health screening are offered.

The student body has chosen to participate in a group plan for accident and sickness insurance coverage for students and dependents. Opportunities to enroll in the program are offered at the beginning of each regular semester. Information is available at the Student Health Services and the Office of Student Life and Services.

Special Programs

Center for Continuing Engineering Education

The Center for Continuing Engineering Education has as its objectives:

1. Providing noncredit engineering education for professional development or occupationally/professionally related purposes.

2. Cooperating with the engineering professions and related professional associations to provide specialized courses and certificate programs.

3. Sponsoring, developing, and cooperating in programs and activities that extend the resources and knowledge of the University to industry, special audiences, and the general public.

Center for Economic Development and Business Research

The Center for Economic Development and Business Research, a service of the W. Frank Barton School of Business, engages in business and economic research for a wide variety of clients in both private and public sectors. The center collects, analyzes, and disseminates information to support activities of government, education, business, and economic development organizations in the Greater Wichita Area.

The center maintains a comprehensive database of economic indicators including retail sales, personal income, employment, construction, census, and financial statistics. Activities focus on issues related to the economic health of the region. The center publishes Business & Economic Report quarterly. A supplemental monthly also is published called Kansas Economic Indicators.

Center for Entrepreneurship and Small Business Management

The Center for Entrepreneurship and Small Business Management, housed in Devlin Hall, is within the W. Frank Barton School of Business. The center is committed to promoting an environment that encourages private enterprise and that seeks to preserve and enhance entrepreneurial activities. The center provides a comprehensive curriculum in entrepreneurial studies from freshman to graduate level.

The center offers a Bachelor of Business Administration in Entrepreneurship (AACSB accredited). The entrepreneurship major is one of the few in the nation providing special training for students who may wish to establish their own enterprise or operate a new and rapidly growing business. It also will be useful for those who expect to become involved with a family owned business or those who desire to take part in new business development or other activities within larger organizations. In addition, MBA students may select entrepreneurship electives resulting in a sequence in entrepreneurship.

Seminars and workshops are offered for those interested in entrepreneurship. The most popular workshop, "Entrepreneurship: Your Future in Business," has received international recognition. In addition, there is a one-week "Entrepreneurship Camp" for high school juniors and seniors.

Additional programs include a visiting lecture series, a complete resource center, and scholarships. The Association of Collegiate Entrepreneurs, an international resource and information network for young entrepreneurs, is headquartered at the center.

Center for Management Development

The Center for Management Development, through the Barton School of Business, offers noncredit management development seminars to the business community.

The WSU management seminars and workshops have been acclaimed for their usefulness to practicing business people and other professionals in a wide variety of organizations. The center offers a broad range of management education and development opportunities to the growth-oriented supervisor, manager, or professional specialist in business, industry, government, and other public or private organizations.

Center for Women's Studies

The Center for Women's Studies coordinates scholarly and curricular activities related to the study of gender and culture. Although within Fairmount College of Liberal Arts and Sciences, the center participates in course offerings, research projects and other educational activities with many other academic units both within and beyond Fairmount College. The center is responsible for administering the BA in women's studies, as well as the minor, and supervises the work of students pursuing a concentration in women's studies in various undergraduate and graduate areas. In addition, the center serves as an informational resource for University students and faculty, as well as for the greater Wichita community.

Cooperative Education Program

The Cooperative Education program is a University-wide, centrally administered academic program providing students the opportunity to integrate formal course work with periods of relevant off-
French Student Exchange Program

WSU is among the 100 colleges and universities in the United States that participate in the annual student exchange organized by the French Ministry of Education. One individual from WSU spends the academic year in France as a salaried assistant in English, and a student from France is attached to the WSU Department of Modern and Classical Languages and Literatures as a salaried assistant in French. Majors and minors in French who have graduated within one year prior to departure date are eligible to apply.

Hugo Wall Center for Urban Studies

The Hugo Wall Center for Urban Studies was established in the late 1950s in response to the profound social, economic, and political change occurring in the Wichita metropolitan area. The center contributes directly to the urban mission of The Wichita State University through teaching, research, and community service focused on the enhancement of government and public affairs.

The Master of Public Administration degree constitutes the primary instructional responsibility of the Hugo Wall Center. The objective of the degree is to provide high-quality professional education for people entering positions of leadership in public and quasi-public organizations. The program has been structured in order to meet the diverse needs of full-time and part-time students, pre-entry and in-service students, students who are changing careers, and students with career interests in public management, public financial management, and public policy.

A core faculty and professional staff with expertise in public policy, public finance, and public management and are engaged in conducting interdisciplinary research and performing community service directed to police makers in state and local government. Current research includes analysis of state-funded emergency shelter and group home services, revenue and expenditure trends in local governments, history of the property tax in Kansas, and compilation of selected papers of former Kansas governors John Carlin and Mike Hayden.

Faculty and professional staff respond to the needs of elected and appointed governmental officials, to the requests of public and quasi-public organizations, and to other segments of the community through a variety of community service programs: seminars for area city and county managers/administrators and city clerks; professional development for area public managerial personnel; certification training for the city clerks and municipal finance officers of Kansas; and municipal leadership workshops for local elected officials. The newest feature of the Center’s community service program is The Wichita Assembly, a community problem-solving forum held twice each year. In addition to the ongoing programs, faculty and staff facilitate planning retreats for local city governing bodies and governing boards of quasi-public organizations, and respond to numerous requests from officials in public and quasi-public agencies for technical assistance.

National Institute for Aviation Research

The National Institute for Aviation Research conducts research projects for government and industry, and provides access to research facilities by faculty and students. Institute laboratories are often used for demonstrations in support of the academic programs of the College of Engineering and the Fairmount College of Arts and Sciences.

The Center for Basic and Applied Research conducts research in the basic areas of aviation, with a focus on aerodynamics, propulsion, flight simulation, structures, avionics, and advanced materials.

The Center for Aviation Safety Research conducts research on topics related to aviation safety, with a focus on crashworthiness of aircraft structures, human factors, de-icing, stall-spin prevention, and aviation software reliability.

The Center for Technology Application provides support to manufacturers in the application of technologies that include Computer Integrated Manufacturing (CIM), Computer Aided Design (CAD), and Quality and Composite Materials. The CTA also operates the Wichita Field Office of the Mid-America Manufacturing Technology Center (MAMTC), a state and federally supported technology transfer program intended to assist small and medium size manufacturers in becoming and remaining competitive.

The Center for Aviation Management Research facilitates the dissemination of institute research through publication and promotion. Research in the areas of aviation education and management and the establishment of cooperative relationships between the institute and industry, government, and other education entities are key activities.

Operation Success, Project Discovery, Upward Bound

Operation Success, Project Discovery and Upward Bound are special programs designed to help students prepare for University life and successfully complete their courses of study.

Operation Success, a federally funded program, provides academic support services which assist students to persist and graduate from WSU. The program provides comprehensive, one-on-one tutorial help; free access to word processors and typewriters; personal counseling; scholarships; career guidance; and assistance in the development of study skills for disadvantaged students who are first generation university students and meet specific income guidelines. The program serves 250 students each year and has been in operation at WSU since 1970.

Project Discovery, a federally funded Talent Search Program, was established at The Wichita State University in July 1977. The project assists approximately 1,500 low-income people in gaining admission to postsecondary institutions throughout the nation. Specific help is provided with admission forms, financial forms and registration for ACT/SAT assessment examinations. The project's two offices at Wichita State and Coffeyville Community College serve high schools and community agencies in Wichita and 12 counties in southeast Kansas.

The Upward Bound program is a federally funded program that has been at WSU since 1966. The program, titled Wichita Prep, assists high school students from low-income backgrounds who have academic potential but inadequate secondary school preparation. The high school sophomores, juniors, and seniors participate in an intensive six- to eight-week summer and academic year schedule to improve academic and social skills. Assistance includes tutorial assistance; academic, career, and personal counseling; postsecondary admission; and classes and workshops.

Research Administration

The Office of Research Administration assists the faculty in developing sponsored research, training, and other service proposals. The office collects, maintains,
and provides information regarding the programs, interests, and needs of governments, private foundations, and businesses; coordinates the preparation and submission of project proposals; and handles the general administration and reporting of sponsored grants and contracts.

Small Business Development Center

The Small Business Development Center (SBDC), part of the Barton School of Business, was established in October 1983. The SBDC provides free one-on-one management/technical assistance, resource referrals/business information and low cost training to small business owners, including potential business owners. The WSU SBDC serves businesses in 16 counties of south-central Kansas.

The state director of all Kansas SBDCs (KSBDSC) also is part of the Barton School of Business and is collocated with the WSU SBDC. The state director oversees ten regional and ten associate SBDCs located at academic institutions throughout the state.

Small Business Institute

The Small Business Institute is housed within the Barton School of Business. Its purpose is to bring together the student's knowledge and the small business person's experience for the benefit of both. Such interaction rounds out the senior student's education with practical experience while offering assistance to small businesses in the community.

University Gerontology Center

The University Gerontology Center develops and coordinates gerontology-related activities and programming at Wichita State, including research, service, and continuing education. The center serves as a resource center and information clearinghouse to assist community agencies and organizations in planning and developing services for older people.

University Press of Kansas

The University Press is operated jointly by six state Kansas universities: the University of Kansas, Kansas State University, The Wichita State University, Emporia State University, Fort Hays State University, and Pittsburg State University. Founded July 1, 1967, it was the first university press in the United States to function on a statewide level under specific sponsorship of all of the state's universities. Offices are located on the campus of the University of Kansas in Room 303, Carruth-O'Leary Hall.

WSU Center for Energy Studies

The WSU Center for Energy Studies conducts energy-related research with emphasis on applications within the state of Kansas. Currently, the major focus of the research conducted in the center is related to various aspects of electric power and energy. However, research related to alternate and fossil energy sources is also within the scope of the center's activities. The industry-supported Power Electronics and Power Quality Research Laboratory is also a part of the Center for Energy Studies. The center is housed in the WSU Department of Electrical Engineering.

Special Facilities

Instructional facilities on the 330-acre Wichita State campus are used for educational purposes more hours per day than at any other Kansas college or university. Many of the University's special facilities are described on the following pages.

Ablah Library

Through a wide range of materials, services, and facilities, Ablah Library supports WSU teaching and research. Its growing collection of more than three million items includes not only books and periodicals, but microforms, corporate annual reports, college catalogs, and audio recordings. The library also serves as a depository for selected official publications of the United States.

The library has open stacks, and reference librarians help students and faculty locate information and use the on-line catalog and reference collection. They also perform literature searches in the numerous computerized data bases to which the library has access. Materials not owned by the library may be borrowed from other institutions through interlibrary loan. The library also makes available study carrels; electronic carrels containing listening and viewing equipment; group-study rooms; microform reading equipment; copy machines; and typewriters.

The Department of Special Collections houses a rapidly growing manuscript collection of more than 700,000 pieces including papers of the abolitionist William Lloyd Garrison and many U.S. congressmen. Other collections include original editorial cartoons by Pulitzer prize-winning cartoonists, publications of U.S. radical organizations, historical Kansas maps, rare books including the W.H. Auden Collection and the Maurice M. Tinterow Collection of books about hypnosis and mesmerism, and the University Archives.

A three-year expansion and renovation project of Ablah Library was completed early in 1989. It provides additional space for collections and for new and expanded services.

Cable Television

The Wichita State University operates Channel 13 on Wichita's cable television system and WINDOWS on suburban cable systems. Both program services feature adult-oriented educational, cultural, and informational programming. This programming includes 12 to 17 television courses per semester offered for academic credit by the various colleges at WSU. Channel 13 and WINDOWS also produce programs featuring distinguished guest speakers, fine arts performances, and other campus events. WSU 13 is affiliated with The Discovery Channel and BizNet, nationally delivered program services.

WINDOWS is affiliated with The Learning Channel. In addition to full-time staff, 15 students are involved in the operation of the channel and the production of programs. Facilities are located in the Media Resources Center.

Campus Activities Center

The Campus Activities Center (CAC) is the community center for The Wichita State University. Through its facilities and services, the center serves students, faculty, staff, alumni, and guests of the University.

The CAC has several dining areas to provide a variety of atmospheres and menus as well as a catering department to meet special needs; the University Bookstore which stocks textbooks, supplies, and gifts; a recreation center for leisure use that includes video games, bowling, billiards, and a barber/beauty shop; a theater; and a variety of rooms that can be scheduled for meetings, special events, and conferences.

The reservations office schedules the use of all facilities in the center and as well as most University facilities for out-of-classroom use. Through the Student Activities Council, students are provided an opportunity to learn and develop leadership skills while planning a variety of programs for the campus. The CAC is also home for the Student Government Asso-
it provides residential, birth to age five,

The Institute of Logopedics is a private, nonprofit, rehabilitation center providing residential and community services located on 40 acres near the Wichita State campus. The institute specializes in habilitation and rehabilitation of children with speech, language, and hearing disorders. It provides residential, birth to age five, and outpatient services. The institute is University-related through its affiliation with the College of Education's Department of Communicative Disorders and Sciences, which offers academic preparation for Wichita State students desiring to work with communicatively handicapped children and adults. Observation and practicum opportunities are provided at the institute as part of the professional preparation of students in speech and language pathology and audiology.

KMUW Radio Station

KMUW Radio broadcasts at 89.1 FM. The 100,000-watt station is one of more than 400 member stations of the National Public Radio (NPR) network. KMUW's mission is to provide high quality cultural and informational broadcast services to the greater Wichita area as part of the university's urban mission of community service. KMUW also provides training and professional experience for WSU students.
Rehabilitation Engineering Center
The Kansas Board of Regents formally established the Rehabilitation Engineering Center in the WSU College of Engineering in 1978. The objective of the center is to use technology to improve the vocational prospects of the severely disabled.
A qualified engineering staff, along with a rehabilitation laboratory, technicians, and a well-equipped shop facility, provide the means to accomplish the center's goals. A federally sponsored rehabilitation grant allows faculty and staff to participate actively in this research.

Satellite Television Reception
Seven satellite television antennas are used to receive video and audio signals from communications satellites serving North America. Satellite television resources provide students studying foreign languages with television programs produced for French and Spanish speaking audiences, furnish programming for WSU's cable television station, and enable the University to participate in national video teleconferences. Receiving antennas are located to the southeast of the Media Resources Center.

Social Science Research Laboratory
The Social Science Research Laboratory (SSR Lab) supports instruction in research methods and provides faculty, staff, students, and off-campus patrons assistance and consultation regarding research issues and questions.

The SSR Lab houses the Test Grading Service for instructors who wish to use the multiple form bubble sheets as test answer sheets. The answer sheets are scanned and the instructor is provided with scores and statistical analyses consisting of the grades (in name and social security number order) and a complete item analysis of the exam. This type of service and consultation is available to individuals working on research projects also. For faculty and staff who work with microcomputers, the SSR Lab is able to up and down load files to and/or from the University's mainframe.

Speech-Language-Hearing Clinic
The Wichita State University Speech-Language-Hearing Clinic, 104 Hubbard Hall, provides diagnosis and treatment of speech, language, and hearing problems, including hearing aid fittings. Services are available on a fee-for-service basis to University students, staff, and faculty, as well as residents of surrounding communities. The clinic is open 8 a.m.-5 p.m. Monday through Friday for scheduled appointments and also on arranged evenings for hearing testing and stuttering and other support group meetings. Senior and graduate students in the communicative disorders and sciences department provide services. All work is supervised by departmental faculty who hold appropriate national certification.

Sports and Recreation
Sports and recreation facilities for students at Wichita State include a regulation 18-hole golf course; the 10,656-seat Henry Levitt Arena which is used for intercollegiate basketball games and major entertainment events; Cessna Stadium, a 31,000-seat stadium; and the 5,665 seat Eck Stadium-Tyler Field, home to the Shocker baseball program, which ranks among the finest college baseball facilities in the country.
Wichita State is a member of the Missouri Valley Conference and consistently ranks nationally in baseball and bowling.

The campus recreation program—featuring the multipurpose complex, the Heskett Center—is designed to provide activities for all students, faculty, and staff. In addition to intramurals and open recreation time, offerings include sport clubs; special events; programs and excursions for children of WSU students, faculty, and staff; a family program; mini-classes and workshops; outdoor recreation, and aquatics.

Marcus Center for Continuing Education
Many educational services are offered through the Marcus Center for Continuing Education, an adult education facility at 4201 East 21st Street. Specialized courses for business and industry, governmental agencies and the professions; special conferences for the general public; and a wide variety of personal enrichment programs are offered in the center. In addition to renting meeting areas, the Marcus Center for Continuing Education staff provides conference support services, program development, brochure preparation, mailings, fee collection, material preparation and reproduction, registration, and program evaluation.

Media Resources Center
The Media Resources Center (MRC) is a comprehensive media and video communications organization serving the instructional, research, and service aspects of Wichita State. The center is housed in a 20,000 square foot, state-of-the-art facility with specialized audio recording studios located in Duerksen Fine Arts Center and Wiedemann Hall. The MRC also operates WSU Channel 13, the University's cable television station.

Facilities and resources include a professional television studio, an electronic classroom, seven satellite downlinks, the campus cable TV network, a fully equipped mobile television production facility, complete photographic darkroom laboratories, and a graphic design studio. The MRC provides the University with video teleconference reception and transmission capabilities.

A wide array of media equipment systems is available for classroom use by students and faculty. These include video recording systems and projection equipment. A collection of 1,000 videotapes is available as well.

Reading/Study Skills Center
Wichita State offers a variety of services to students through the programs of the Reading/Study Skills Center. Courses are offered to help students improve their reading and study skills. Complete descriptions of courses offered at the center are included in the University College section of the Catalog.

In addition to formal course work, other study skills workshops are made available to students enrolled at Wichita State.
Edwin A. Ulrich Museum of Art

The Edwin A. Ulrich Museum of Art is recognized nationally for the outstanding quality of its programs as well as its outdoor sculpture collection. During its first 17 years of existence, the Ulrich Museum has presented more than 600 exhibitions, ranging in scope from the poetic paintings of Joan Miro to the hyper-realist sculptures of Duane Hanson.

The museum has had one-person exhibitions of work by Joan Miro, David Hockney, Milton Avery, Kenneth Noland, Al Held, Romare Bearden, Morris Louis, Isabel Bishop, Frederic Church, Child Hassam, Alice Neel, Robert Motherwell, Alberto Giacometti, Gaston Lachaise, Duane Hanson, plus the work of many other famous artists.

Although the emphasis has been on contemporary art, there have been exhibitions as diverse as prehistoric American Indian pottery, Midwestern naïve art, contemporary neon sculpture, treasures from Spanish galleons sunk in 1724, art from 16th and 17th century Antwerp, artifacts from the Civil War Ironclad U.S.S. Monitor, holography, electronic art, African art, and the art of New Guinea. In addition, there have been numerous photographic, print, and ceramic exhibitions.

The on-campus museum is named after Edwin A. Ulrich, a retired New York businessman, who gave the University more than 300 paintings and $1,147,000 to support the collection. The Ulrich gift, valued at $4 million, is among the largest single donations ever made to the University.

The Wichita State University Endowment Association art collection numbers more than 7,000 items. Nineteenth and twentieth century European and American art forms the core of the collection augmented by hundreds of other paintings, drawings, prints, sculptures, photographs, and ceramics.

Of special note, the Ulrich Museum contains the most complete collection of paintings by the world-famous American marine artist, Frederick Judd Waugh (1861-1940). The museum also houses extensive groups of work by such artists as Kathe Kollwitz, Charles Grafly, Harry Sternberg, Robert Goodnough, William Gropper, Josef Presser, Honore Daumier, Frank Lloyd Wright, and Ernest Trova.

Reaching beyond the traditional museum’s walls, the University has an outdoor sculpture collection which is one of the best in the nation. The collection is a cross-section of 20th century sculpture, featuring works by Auguste Rodin, Henry Moore, Louise Nevelson, Joan Miro, George Rickey, Fernando Botero, Barbara Hepworth, Chaim Gross, Theodore Roszak, William Zorach, Ernest Trova, Robert Indiana, Luis Jimenez, Lynn Chadwick, and many others.

The largest and most significant outdoor work is the marble and glass mosaic, Personnages Oiseaux, created especially for the facade of the Ulrich Museum by the late Spanish artist, Joan Miro. The mosaic, the largest in the work by Miro, is constructed of more than one million pieces of colored Venetian glass and marble.

Another aspect of the museum is its visiting artist program. More than 50 artists have visited WSU, including Henry Moore, Louise Nevelson, Luis Jimenez, Isabel Bishop, Duane Hanson, Gordon Parks, W. Eugene Smith, Arnold Newman, Milton Glaser, Paul Rand, Alice Neel, Theodore Stamos, and Will Barnet. The museum also has organized traveling exhibitions of work by such artists as Duane Hanson, Gordon Parks, Ernest Trova, and Frederick Waugh.

Wichita Radio Reading Service

A sub-carrier of KMUW, the Wichita Radio Reading Service programs readings of printed material to more than 2,000 print-handicapped individuals. One hundred volunteers supply the readings, with additional programming from the In-Touch Network and National Public Radio.

Wiedemann Hall

Wiedemann Hall houses the first organ built in North America by the world-renowned firm of Marcussen and Son, Denmark. The hall, which was dedicated in 1986, is the ideal acoustical setting for the organ. In addition to the hall’s main auditorium; the building has four faculty offices; an organ studio; and rooms to accommodate announcing, recording, and televising.

The building is named for the late community philanthropist and music-lover Gladys H.G. Wiedemann who in 1983, as president of the K.T. Wiedemann Foundation, Inc., donated the great Marcussen organ.

Bloomfield Foyer, a gift of the Sam and Rie Bloomfield Foundation, Inc., graces the entrance to Wiedemann Hall.

Walter H. Beech and Supersonic Wind Tunnels; Water Tunnel

Various wind tunnels are available at Wichita State for faculty and student use in aerodynamic studies. The Walter H. Beech Wind Tunnel is a 160 mph closed-return tunnel with a 7 x 10 test section. A matching grant from the National Science Foundation of $113,000 helped install a new data acquisition and reduction system; improved plotting and printing capabilities; a new Hewlett-Packard computer system; a better video system (camera and monitor) as an aid in flow visualization; structural improvements and remodeling, including a new roof over the wind tunnel for better heat insulation; and a new electronic starter and motor control system.

Two supersonic wind tunnels, capable of producing wind velocities from two to four times the speed of sound, are available.

A 1 x 1.3 meter subsonic wind tunnel features a laser velocimetry system for flow measurement. A digital data acquisition and reduction system accompanies a six-component sting balance for force and pressure measurements. Two smoke tunnels, a boundary layer tunnel, a water table; and a new water tunnel are also available for flow visualization studies.

The 2 x 3 water tunnel which began operation in 1987, is excellent for flow visualization. Dye filaments are introduced into the flow and data is taken with cameras and videotape recordings.

Student Activities and Organizations

Student organizations may be granted the privileges of a University organization if registered with the Student Government Association (SGA), providing lists of officers and other executive members, statements of purposes, and copies of constitutions bylaws. Once an organization is registered with SGA, it may use Wichita State in its name, use University rooms or grounds for meetings, and post announcements on University bulletin boards.

Student Government Association

Wichita State believes that one of its primary tasks is preparing students for the responsibilities of citizenship in a democratic society. With this in mind, it places an increasing emphasis on the role the Student Government Association (SGA) plays on campus.
The legislative, executive and judicial responsibilities of SGA are vested in the Student Senate, Cabinet, and University Supreme Court. The senate appoints students to University committees, recognizes and funds student organizations and allocates approximately $1.7 million annually to campus agencies ranging from the child development center to the Heskett Center. The cabinet executes the decisions of the senate and the officers. The supreme court issues opinions on constitutional questions and also serves as an appeals court. Each of these entities also participates in the determination of University policy.

Each student is automatically a member of SGA and is eligible to vote in the annual elections in November. All students are encouraged to participate in student government through the many opportunities SGA offers.

For more information contact the Student Government Association, Room 202, Campus Activities Center, The Wichita State University, (316) 689-3480.

**Student Rates**

Special rates for students are available for some campus activities. The following offices have ticket and price information: Campus Activities Center—on-campus movies; Duerksen Fine Arts Center (School of Music)—Wichita Symphony Orchestra and on-campus events; Wiener Auditorium—University Theatre; Henry Levitt Arena—athletic events; campus golf course—student golf rates.

**Fraternities and Sororities**

Eight national fraternities are active at the University: Alpha Kappa Alpha, Alpha Phi, Delta Delta Delta, Delta Gamma, Delta Sigma Theta, Gamma Phi Beta, Sigma Gamma Rho, and Zeta Phi Beta. Thirteen national fraternities are also on campus: Alpha Delta Delta, Alpha Kai Omega, Beta Theta Pi, Delta Upsilon, Kappa Alpha Psi, Kappa Sigma, Omega Psi Phi, Phi Beta Sigma, Phi Delta Theta, Pi Kappa Alpha, Sigma Alpha Epsilon, Sigma Nu, and Sigma Phi Epsilon.

**Organizations**

**Honorary**
- Alpha Pi Mu
- Beta Alpha Psi (Epsilon Tau Chapter)
- Beta Chapter—Phi Sigma Tau
- Emory Lindquist Honors Society
- Eta Kappa Nu
- Golden Key National Honor Society
- Honors Society

**Kappa Delta Pi**
- Kappa Kappa Psi
- Lambda Alpha
- Mortar Board
- Omicron Delta Epsilon
- Omicron Delta Kappa
- Order of Omega
- Phi Alpha Theta
- Pi Eta Sigma
- Pi Delta Phi
- Pi Epsilon Delta
- Pi Mu Epsilon
- Pi Sigma Alpha
- Pi Tau Sigma
- Psi Chi
- Senior Honor Men
- Senior Honor Women
- Sigma Delta Pi
- Sigma Gamma Epsilon
- Sigma Gamma Tau
- Sigma Theta Tau
- SPURS
- Tau Beta Pi
- Tau Beta Sigma

**Professional and Departmental**
- Administration of Justice Association
- AIESEC
- Alpha Eta Rho international Aviation Fraternity
- Alpha Kappa Psi
- American Institute of Aeronautics and Astronautics
- American Society of Mechanical Engineers
- Anthropology Club
- Association of Collegiate Entrepreneurs
- Association for Computing Machinery
- CMENC
- Creative Music Society
- Debate Society
- Dental Hygiene Association, Junior American
- English Graduate Student Association
- Forensic/Debate Society
- Graduate Student Association for Public Administration
- Institute of Electronics and Electrical Engineers
- Institute of Industrial Engineers
- Kansas Student Society of AAPA (Physician Assistants)
- Legal Assistants Society
- Math Club
- Medical Technology Student Association
- National Student Business League
- National Student Speech, Language and Hearing Association
- Philosophy Society
- Pi Sigma Epsilon (Gamma Theta chapter)
- Political Science Club
- Potters Guild
- Psychology Graduate Student Organization
- Public History Club
- Society of Automotive Engineers
- Society for Human Resource Management
- Society of Manufacturing Engineers
- Society of Professional Journalists
- Society of Women Engineers
- Student American Dental Hygienist Association
- Student Chapter of the American Advertising Federation
- Student National Education Association
- Student Physical Therapy Association
- Women in Communications, Inc.

**Special Interest**
- ABLE
- American Arab Anti-Discrimination Committee
- Aquatics Club
- Associated Malaysian Students of Wichita
- Baha’i Club
- Baptist Student Union
- Black Student Union
- Campus Guides
- Chess Club
- Chinese Student Association
- Christian Vanguard
- College Republicans
- Crew Club
- Democrats, WSU
- Friends of Women’s Studies
- GAMMA
- Gamma of Kansas
- Hispanic Leadership Organization
- Indian Student Association
- Indonesian Student Association
- International Student Association
- Intervarsity Christian Fellowship
- Japanese Student Association
- Korean Student Association
- LaCrosse Club
- Latvia Student Association
- LaTable Francaise
- Latter Day Saints Student Association
- Men’s Soccer Club
- Mikrokosmos
- Model United Nations
- Muslim Student Association
- Native American Student Association
- Nurses Christian Fellowship
- One 2 One
- Organization of Pakistani Students
- ProChoice Action League / S.O.S.
- Racquetball Club
- Rhema Christian Fellowship
- Russki Kruzhok/Russian Club
- Semper Fidelis Club
- Shockers Respect Life
Shri Lankan Student Association
Sigma Gamma Rho
Singapore Student Association
Skydive and SCUBA Club
Student Alumni Association
Student Association of Bangladesh
Student Health Advisory Board (SHAB)
Student Orientation Leaders Association
Student Peace Group
Student Radio Organization
Tai Chi Club
Thai Students Association
Turkish Student Association
Union of African Students Organization
Vegetarian Student Association
Vietnamese Student Organization
Volleyball Club
Water Ski Club
Wichita Student's Christian Fellowship
WSU Spirit Squad
Young Socialist Alliance

Governing
Engineering Council
Interfraternity Council
Junior Greek Council
Pan-Hellenic Association
Student Activities Council
Student Government Association
Women's Panhellenic Association
University College

James W. Kelley, PhD, Dean

The primary goal of University College is to assist students in their educational endeavors by providing relevant support services. Responding to the diverse needs and goals of both degree and nondegree-bound students requires a well-conceived and flexible system of programs and services.

Students in University College are enrolled in courses offered by departments in the degree-granting colleges and taught by faculty from those departments. Exceptions are the credit or non-credit courses offered by University College.

University College is the academic home for (1) all freshmen working toward degrees; (2) those transfer students who have not completed 24 semester hours with a 2.000 grade point average or higher or those who have not declared academic majors; (3) nondegree-bound adult students; (4) guest students attending other colleges and universities who wish to enroll at Wichita State on a temporary basis (for 15 hours only); and (5) selected high school students who have the consent of their high school principals.

Degree-bound students are provided with academic support services which will enable them to make successful transitions to degree-granting colleges. While enrolled in University College, those who are seeking degrees are expected to develop educational planning skills, remove high school deficiencies, develop effective study skills and habits, choose an academic major, develop personalized academic and career/life plans, and complete part of the general education requirements.

Nondegree-bound students receive services designed to be responsive to the unique needs, responsibilities, and learning styles of adult students. Programs, policies, and procedures emphasize ease of access to the University and its resources and opportunities for individual assistance.

Services focus on individuals who want to take courses for self-enrichment, career change, general updating, or professional certification. Academic and career advising also are provided for those students who may decide to work toward a degree after their initial enrollment.

University College services include orientation and educational planning programs; registration, advising, and consultation; reading and study skills courses; adult seminars and career exploration seminars for individualized assessment and vocational exploration; and special programs targeted to specific student populations.

Admission to University College

Degree-bound Students: For more information on general University admission requirements, see the Admission to Wichita State section of the Catalog.

Nondegree-bound Students, Regular: Students who are not currently working toward specific undergraduate degrees at Wichita State are admitted as regular nondegree-bound students. To be admitted, they must submit high school transcripts or GED scores—and if they have attended college, college transcripts—to the Wichita State admissions office. Failure to report all previous schools attended will result in dismissal.

Nondegree-bound Students, Special (Open Admission). Adults may be admitted as special open-admission students for a maximum of 15 hours if:
1. They have graduated from high school and have not attended any school for two years or
2. They have not graduated from high school and are at least 21 years of age or
3. They are currently on active military duty or
4. They hold a bachelor’s or higher degree.

Students admitted under the open-admission policy need only submit an application for admission. Test scores and transcripts are not required.

Students admitted under the open-admission policy will be considered nondegree bound for the first 15 semester hours. In order to pursue work beyond the semester in which the 15th hour is completed, students must declare themselves to be regular nondegree students in University College or they must apply for admission as degree-bound students in University College or one of the degree-granting colleges of the University. Transcripts of previous high school or college work (or GED scores) will be required at this point.

Orientation

Orientation and educational planning programs help new students become a part of the learning community and teach the requirements, expectations, and procedures of that community. The programs assist students in thinking through and developing written plans for their personal development, education, and future careers.

Specially selected student leaders and faculty members are carefully trained to work with new students in small groups during orientation.

Degree-bound Students: Because orientation and educational planning are not prerequisites to education, but rather are a part of college education itself, all first-semester degree-bound University College students are required to attend an academic orientation and to participate in personal planning sessions. A required, nonrefundable orientation fee is charged to all students. Orientation programs are scheduled in advance of the fall and spring semester and Summer Session. Information about orientation and registration is sent by University College to all students who have been admitted to University College.

Nondegree-bound Students: Orientation programs are available, and recommended, for nondegree-bound students. UC 100A, Adult Seminar, a class designed for adults who have been out of school for one year or more, also is available as an enrollment option. Parts of the course serve as an ongoing orientation and the class is offered fall and spring semesters. Contact University College for more information.

Academic Advising

Academic advising is more than class schedule building. It is an ongoing, shared relationship between student and adviser that is an essential part of the university experience.

Degree-bound Student: Every semester all degree-bound students enrolled in University College are expected to develop academic plans with the assistance of their academic advisers. Each degree-bound student is assigned an academic adviser. When a student declares a major field of study, he or she is assigned a faculty member in the academic department offering that area of study. Deciding stu-
Dentists who have not declared a major area of study are assigned to members of the faculty and staff with academic advising responsibility in University College and other areas within the Division of Student Affairs.

Students planning on professional graduate-level studies (medicine, law, theology, etc.) are assigned to qualified faculty advisers in the selected preprofessional areas for developing strong undergraduate preparation. Students should check with their assigned advisers to see what preprofessional courses should be taken while they are in University College.

Nondegree-bound Students: Nondegree-bound students normally are not required to see an adviser or counselor for course approval before registration if they meet course prerequisites. However, students are encouraged to seek advice if they have questions or uncertainties about the type of course in which to enroll. Those students who are considering the possibility of transferring to degree programs at a later date should discuss their plans with an academic counselor to be sure that they are developing the best possible educational foundation.

Special Programs

Because of its urban setting and mission, Wichita State enrolls students with diverse backgrounds, aspirations and levels of educational attainment. In University College, special programs are designed to respond to the individual needs of students. As students seek to establish a foundation upon which their individual talents are developed and as they explore educational and career options through the university experience, special programs have been designed to support targeted student populations. Programmatic goals and objectives are designed to provide activities, academic support services, and educational experiences to facilitate the transition, intellectual, emotional, and personal growth and development of targeted students. Special program efforts in University College are intended to meet the challenges of student retention and are focused in two critical areas, service, and instruction.

Career/Life Planning

Degree-bound Students: A career/life planning emphasis helps degree-bound students begin to develop systematic career/life plans after realistically assessing their interests, values, and capabilities. University College academic counselors assist students in the exploration of the academic curriculum in preparation for their career/life choices. The counselors also help to identify people and information resources for further information on academic majors and/or career options. A course in career exploration, UC 102, is offered as part of the program.

Nondegree-bound Students: Career/life planning activities are designed to provide nondegree students with support for exploration, clarification, decision making, and follow-through in issues related to self-enrichment, job advancement, career change, general updating, or professional certification. Specific activities include personal and group communications, using resource materials, interest testing, and referrals. Credit courses, including Adult Seminar and Topics in Career Exploration, are offered as part of this emphasis.

General Education Program

Degree-bound students at Wichita State are required to enroll in a specific number of semester hours of general education courses. Wichita State’s requirements are based on the conviction that college graduates should be exposed to a broad sampling of knowledge about themselves and the world—not a narrow discipline of knowledge and skills.

Specifically, the general education program offers a variety of opportunities to acquire and apply knowledge; to think critically; to solve problems; to clarify values; to communicate within a variety of settings; and to understand the role of science, technology, and the arts.

The general education program is the means by which students obtain knowledge and skills which are permanent, practical, and transferable, and which cannot be rendered obsolete either by changes in technology or by the expansion of knowledge. These are the key elements of a university education which are intended to prepare a student not for the first job after graduation, but for a lifetime.

Nondegree-bound students are eligible also to take advantage of the opportunities offered through the general education program. Students are invited to visit with an academic counselor in University College to learn more about the classes which make up this program. Students considering the possibility of a degree program at some future date should be aware of the manner in which general education fits into a degree program.

Policies

First Semester—Transition Semester

Because there is a special period of transition and adjustment to university life, students in their first semester of college work may choose a special option of translating letter grades into credit or no credit at the conclusion of the first semester, as discussed under the Academic Information—Transition Semester section of the Catalog.

Advanced Placement and Credit

WSU students may earn credit toward a degree by satisfactory achievement on specific tests. Scores on the American College Test (English and mathematics), Advanced Placement Program, College-Level Examination Program (all general and certain subject examinations), and the Proficiency Examination Program (specific tests) may be presented for evaluation. For full details, consult the coordinator of testing in the Counseling and Testing Center.

Enrollment Limits

Students in University College in good academic standing may enroll for a maximum of 21 hours during fall and spring semesters and a maximum of 12 hours during the summer. Students wishing to enroll beyond these limits will need specific approval from the dean or associate dean of University College.

Student Responsibility

Students are expected to familiarize themselves with course prerequisites, enrollment dates, procedures, and all other policies stated in the current Catalog and in the Schedule of Courses.

Once students have enrolled in a course, they are officially entered in that course. Students must either withdraw from the course by completing and filing an official drop slip or they must complete the course. If students fail to withdraw or satisfactorily complete course requirements, they will receive a failing grade for that course. (See Academic Information in the Catalog for full details about grading policies, incompletes, and similar policies.)

Transferring to a Degree Granting College

Degree-bound Students: All students seeking a degree are expected to qualify
for transfer to one of the six undergraduate degree-granting colleges at the end of the semester in which they complete 24 semester hours. To qualify for transfer to a degree-granting college, a student must have completed 24 semester hours successfully, met the minimum GPA required by the college, successfully completed any prerequisite courses and completed the Basic Skills component of the general education program. All students must complete the Basic Skills courses no later than the semester in which they will have completed 48 semester hours. Students who have not met these requirements may be limited to enrollment in only the necessary Basic Skills courses until that work has been satisfactorily completed.

Students who have declared a major and who qualify for transfer into the colleges of their choice are transferred automatically.

Degree-bound students may not continue in University College after the semester in which they complete 48 semester hours.

Nondegree-bound Students: Those students not seeking degrees may remain in University College beyond 48 hours. Those who subsequently wish to work toward Wichita State bachelor's degrees may transfer their credits to an undergraduate degree-granting college. In transferring to another college, students must meet the admissions requirements established by that college.

Probation and Dismissal Standards

Probation: Since a 2.000 (C) average is required for graduation, students are placed on academic probation whenever they have attempted six hours and their WSU grade point average falls below 2.000. (An explanation of terms used in this section is found in the Academic Information section of the Catalog.) The transition semester counts toward the number of hours attempted but does not count in the calculation of the grade point average used to assess probation or dismissal.

Transfer students admitted on probation must complete at least 12 semester hours of credit work and achieve a 2.000 grade point average on work at Wichita State before probation is removed.

Students on probation normally are limited to a maximum load of 12 hours per semester, although exceptions may be made by the Dean of University College. The limitation of 12 hours also applies to students who have declared a transition semester.

Dismissal: All University College students who have accumulated 12 attempted credit hours after being placed on probation (unless other standards were specified as a condition of admission or readmission) and who do not have a 2.000 grade point average for the most recent semester or Summer Session will be academically dismissed. Once degree-bound students accumulate 48 hours, they will be transferred or dismissed from University College. The grading system is explained in the Academic Information section of the Catalog.

Readmission after Academic Dismissal

Students who have been academically dismissed may seek readmission to University College by appealing, in writing, for an exception to the regulations. University College requires petitioners to meet with an academic counselor for a personal interview and to prepare a written petition which is considered by the University College Exceptions Committee and then forwarded to the University's Committee on Admissions and Exceptions for final action.

Because counseling and advanced planning require careful attention and much time, students must secure their recent academic records, complete their petition satisfactorily, and have had their final readmissions interview at least ten days before the first day of enrollment. Interviews are not conducted during any of the scheduled registration sessions.

Cases for readmission must be developed by the students themselves. They should center their petitions around explanations for their failures and presentations of evidence for their future successes.

Credit Courses

100. Freshman Seminar. (1). A study of the University as a resource for personal development and the development of an individual master plan for study and self-development in the University.

100A. Adult Seminar. (1). A special class for adults who have been out of school one year or more. Designed to help adults learn more about themselves and about The Wichita State University. Covers career information, interest testing and interpretation, educational planning and other activities.

100P. Parents' Course. (1). A study of the issues and experiences which confront new students at The Wichita State University, how these issues may impact on parents and how parents can be constructively supportive during this major, new life experience.

102. Topics in Career Exploration. (2). Involves students in the career/life, educational planning and decision-making process based on career development theories. Uses various assessments and exercises to explore values, interests and skills as they relate to career choice. Students research occupations and gain knowledge of labor market trends. Course content assists in exploration of college major and career path choice or change. Addresses current workplace issues.

150. Workshop: Special Topics. (1-3). Meets identified needs of specific audiences.

160. Reading and Study Skills. (3). For any student who seeks to enhance his/her reading speed, reading comprehension and study skills. Other topics include time management, note-taking skills and test-taking strategies which prepare students for both university course work and our fast-paced society.

Noncredit Course

The following course is not applicable to a degree.

050. Personal Assessment Planning. (1 or 3). A noncredit seminar for students admitted or re-admitted to the University through special committee action (University and/or college exceptions). Allows students to assess their own skills, aptitudes, interests and values, and then attempts to assist students with modifying those behaviors which contributed to previous poor academic performance. Not an elective.
W. Frank Barton School of Business

R. Malcolm Richards, PhD, Dean

The mission of the W. Frank Barton School of Business is quality education, research, and service in business, economics and entrepreneurial disciplines. This mission is achieved through (1) undergraduate and graduate degree programs designed to prepare professionally competent and socially responsible men and women for careers in business, government, and other organizations; (2) theoretical and applied research to enhance the quality of the degree programs and advance the body of knowledge; and (3) public service activities to facilitate economic and professional development.

Consistent with the University's role as the Regents' urban institution, the Barton School aggressively pursues regional and national prominence for its academic and professional programs. This mission is influenced by the location of the school in the largest economic and cultural center in the State of Kansas. As an integral part of the state's designated urban university, the faculty of the Barton School of Business are committed to programs and activities that will help sustain the contribution that this urban center makes to the economic, professional, and cultural health of the state and nation.

Within this context, the faculty of the school state the following objectives:

1. To offer programs (undergraduate, graduate, and postgraduate) to develop and update professional competence in all facets of management and administration
2. To add to the total body of knowledge concerning business and administration through fundamental and applied research and to participate actively in the search for solutions to business and community problems
3. To serve as an information and research center for the community, state, and region
4. To foster mutually supportive relationships with the business community of the city, state and nation in order to promote understanding and cooperation in educational and professional activities.

The school is a member of the American Assembly of Collegiate Schools of Business; its undergraduate and graduate programs are accredited by this organization.

Degrees Offered

Undergraduate Bachelor's

The undergraduate curriculum of the Barton School of Business leads to the Bachelor of Business Administration (BBA). Areas of emphasis or majors are offered in several fields within the School of Accountancy and the following departments: economics; finance, real estate and decision sciences; management; and marketing and small business.

Students may obtain a second bachelor's degree in the Barton School of Business if they: (1) complete a minimum of 30 hours in residence in the Barton School of Business (in addition to the work required for the first bachelor's degree) and (2) satisfy the school's general requirements and emphasis/major requirements in effect at the time they embark on the program leading to a second bachelor's degree.

Associate of Science

A two-year program in legal assistant training, which leads to the Associate of Science, is available. The legal assistant program is offered by the Department of Finance, Real Estate and Decision Sciences.

Graduate

Master's degree programs in the school lead to the Master of Business Administration (MBA), Master of Professional Accountancy (MPA), Master of Science (MS) in administration, and the Master of Arts (MA) in economics.

For additional information on graduate programs, see The Wichita State University Graduate Bulletin and the Barton School of Business—Master of Professional Accountancy section of the Catalog.

Business Emphases in Other University Programs

Students in Fairmount College of Liberal Arts and Sciences may major in economics. Students from all colleges may minor in accounting, business administration, or economics. Students in the College of Education may minor in economics or accounting. Students in all colleges other than business may pursue a minor in business administration.

A field major in international studies is offered in cooperation with Fairmount College of Liberal Arts and Sciences for students interested in specializing in a foreign area of the world or in international business, economics or affairs. The major prepares students for careers in international organizations within the U.S. government and in business firms. Additionally, a cooperative chemistry/business program is offered in the Department of Chemistry.

The Barton School of Business provides the organizational administration course work for the degree program in health care administration offered through the College of Health Professions. This program prepares students to be qualified health care administrators in one of the many types of health facilities.

Policies

Admission

Entering Wichita State freshmen interested in business administration are first admitted to University College and must meet the general entrance requirements of the University.

Initial admission to the Barton School of Business is available to students from University College, degree-granting colleges within the University, or other universities and colleges, provided the student has (1) completed 24 semester credit hours, (2) a cumulative grade point average of 2.250 and (3) completed six hours of English composition, three hours of mathematics, and three hours of college algebra with a grade of C or better in each.

Advanced standing in the Barton School of Business is available to students who have (1) completed 60 semester hours; (2) a cumulative grade point average of 2.250; (3) completed six hours of elementary accounting, six hours of elementary economics, business statistics, business calculus, and a business computer course; and (4) declared a professional major in the college. Note: For degree-seeking students in the Barton School of Business, advanced standing is a prerequisite for all upper-division courses in the school.

Transfer students planning to transfer into the Barton School of Business from another two- or four-year institution to
obtain the BBA are advised to complete as much of Wichita State's general education requirements as possible before transferring. The following course areas are recommended for the first two years of college work:

Mathematics
- College algebra (3 hours)
- Survey of calculus (3 hours)

Communication
- Composition (6 hours)
- Speech (3 hours)
- Humanities (9 hours)

Social sciences
- Principles of economics (6 hours)
- Psychology, sociology, anthropology, political science (6 hours)

Business
- Introductory accounting (6 hours)
- Business microcomputers (3 hours)
- Business statistics (3-4 hours)

Nonbusiness electives (10 hours)

Limitations on Student Load
Initially admitted Barton School of Business students are limited to a maximum of 16 hours, to which may be added one hour of physical education. Students admitted to advanced standing in the college are limited to a maximum of 18 hours, to which may be added one hour of physical education.

All Barton School of Business students are limited to enrollment in one course during a summer presession, one course in any four-week summer session and two courses in any eight-week summer session. If a student is enrolled in both an eight-week and a four-week summer session, the maximum enrollment is two courses.

Types of Advising Assistance Available
- Transcript Evaluation. Two aspects of transcript evaluation affect students: (1) the evaluation of course work to be transferred to The Wichita State University for a degree and (2) the continuing evaluation of completion of graduation requirements.

Evaluation of transfer work is initially accomplished by the University's Office of Admissions. Evaluation of business and economics course work is done by the school's student records office, 106 Clinton Hall, working in conjunction with the dean's office and the various departments within the school.

The student records office also keeps a current record of each student's progress at The Wichita State University. Many students will be able to take advantage of the school's automated degree audit system. This on-line system provides students a personal copy of their academic record, including work in progress.

Schedule Building. Schedule building is the determination of specific courses a student should take in a given semester. Students should refer to The Wichita State University Schedule of Courses and Catalog in consultation with a faculty adviser or staff of the school's advising center to determine a specific course of study. Selection of specific sections and of times for courses is the student's responsibility. The tentative schedule must be approved by an adviser.

Program Planning. Students are encouraged to outline an entire plan of study early in their academic career. This program planning activity is provided by the advising center and includes suggested model programs for each of the major fields of study offered by the school.

Counseling. Students seeking career guidance, personal counseling or other types of assistance will be directed to the appropriate University office by the staff of the advising center.

Where To Find Advising Assistance
Office of the Dean (100 Clinton Hall). Students should come to the Office of the Dean for special advising assistance that cannot be resolved at locations described below and to file appeals and waiver
requests relative to school and University regulations. The dean's office also will refer students to the appropriate office should the student be unsure as to where to find assistance.

Undergraduate Academic Advising Center (114 Clinton Hall.) The Academic Advising Center is staffed to provide assistance in understanding degree program requirements, planning an entire academic course of study, designing a course schedule for a particular semester and for providing referrals to other University offices for assistance as appropriate.

Student Records Office (106 Clinton Hall). The Student Records Office maintains a complete and up-to-date file for each student admitted to the Barton School of Business.

Legal Assistant Majors (100 Clinton Hall). All legal assistant majors are advised by the associate director of the Legal Assistant Program. Appointments should be made in the Office of the Dean.

Academic Honesty
The faculty of the Barton School of Business strongly endorses the statement on academic honesty appearing in the general information section of this Catalog.

Graduation Requirements
Bachelor of Business Administration
Candidates for the Bachelor of Business Administration degree must satisfy the following Barton School of Business requirements:

1. Complete at least 56 hours of course work offered outside the school (Econ. 201Q and 202Q may count as courses outside the school, but Hist. 515, 516 and 614 and Pol. Sci. 655 and 687 may not.)

2. Complete at least 50 semester hours of course work offered by the Barton School of Business

3. Complete the set of core requirements specified for the Bachelor of Business Administration, given later in this section

4. Complete the requirements for a major in the Barton School of Business

5. Achieve a grade point average of 2.250 or better on (a) all college work, (b) all work taken at Wichita State, (c) all business and economics courses, (d) all business and economics courses taken at Wichita State, (e) all courses counted toward the student's major/emphasis and (f) all courses counted toward the student's major/emphasis taken at Wichita State.

Three levels of requirements must be completed to receive a BBA: (1) University general education and graduation requirements, listed in the Academic Information section of the Catalog. (2) general requirements in the Barton School of Business and (3) school major requirements. Students should complete the requirements in the order listed, with some overlap and duplication of courses among the three levels.

The following sequence of required courses is recommended:

**Freshman Year**
- Math. 111, College Algebra
- Math. 144, Business Calculus
- Engl. 101-102, College English I-II
- Comm. 111, Public Speaking
- General education electives

**Sophomore Year**
- Acct. 210, Financial Accounting I
- Acct. 220, Managerial Accounting I
- Acct. 260, Introduction to Information Processing Systems for Business
- Econ. 201Q-202Q, Principles of Economics I-II
- Econ. 231, Introductory Business Statistics
- General education electives

**Junior Year**
- DS 350, Introduction to Production and Operations Management
- DS 495, Management Information Systems for Business
- Fin. 340, Finance
- Mgmt. 360, Management and Organizational Behavior
- Mkt. 300, Marketing
- Upper-division business law course
- Upper-division economics course
- Major courses

**Senior Year**
- Mgmt. 430, Business, Government and Society
- Mgmt. 681, Administrative Policy
- Major courses

Students planning to enroll in upper-division business courses (courses numbered 300 to 600) must have completed 60 semester credit hours. Accreditation of the school by the American Assembly of Collegiate Schools of Business stipulates that students must be classified as juniors to enroll in upper-division courses. Exceptions are made to this requirement for any of the following:

1. Students who have close to 60 hours and have enrolled in the required lower-division (100-200 level) courses may enroll in introductory upper-division courses to complete a full schedule.
2. Students with a cumulative grade point average of 3.250 or above may have the junior standing prerequisite waived with the consent of the instructor of the course and the chairperson of the department in which the course is taken.
3. Students may petition the school's Exceptions Committee for special permission to enroll in upper-division courses.

The suggested sequence of courses includes classes which are part of the Barton School of Business core requirements. Core courses required for the BBA are:

I. Mathematics
   - Math. 111, College Algebra
   - Math. 144, Business Calculus
   - Math. 242Q, Calculus I

II. Environment of Business
   - B. Law 436, Law of Business Associations
   - Mgmt. 430, Business, Government and Society
   - Econ. 201Q-202Q, Principles of Economics I-II and one upper-division economics course

III. Business Functions
   - Mkt. 300, Marketing
   - Fin. 340, Finance
   - DS 350, Introduction to Production and Operations Management

IV. Accounting, Quantitative Methods and Information Systems
   - Acct. 210, Financial Accounting I
   - Acct. 220, Managerial Accounting I
   - Econ. 231, Introductory Business Statistics

V. Organizational Theory
   - Mgmt. 360, Management and Organizational Behavior

VI. Business Policy
   - Mgmt. 681, Administrative Policy

*These courses are prerequisite for upper-division courses.

Note: Any faculty member teaching an upper-division course in the Barton School of Business may assume that all students have completed the specific courses listed under Freshman Year and Sophomore Year above.

Major/Minor Areas
Candidates for the BBA degree must satisfy the additional requirements of one of the following curricular majors. All students may avail themselves of the indicated minors. The minimum grade
point average for a minor field of study shall be the same as the minimum grade point average required for graduation with a major in the same field.

School of Accountancy
Two degree programs are offered by the School of Accountancy—the Master of Professional Accountancy (MPA) and the Bachelor of Business Administration with an accounting major. In addition, a minor in accounting is available to students who are not accounting majors. For information about the Master of Professional Accountancy degree, see the Barton School of Business—Master of Professional Accountancy section of the Catalog. Undergraduate students may begin work leading toward the MPA degree early in their academic career.

MPA—Preprofessional Program Major
For a description of the undergraduate course work in the preprofessional component of the MPA degree program, see the Barton School of Business—Master of Professional Accountancy section of the Catalog.

BBA—Accounting Major
Requirements for a major in accounting within the Bachelor of Business Administration degree are as follows:

**Course** | **Hrs.**
--- | ---
Acct. 310 and 410, Financial Accounting II and III | 6
Acct. 320, Managerial Accounting II | 3
Acct. 430, Taxation I | 3
Acct. 560, Accounting Information Systems I | 3
Acct. 640, Auditing I | 4
B. Law 435, Law of Commercial Transactions | 3
B. Law 436, Law of Business Associations | 3
*Upper-division economics elective* | 3
Engl. 210, Composition: Business, Professional and Technical Writing | 3
*Upper-division directed electives selected in consultation with an accounting adviser* | 6

*May be counted as part of the Barton School of Business core requirements. Admission requirements for the CPA examination in Kansas specify a course in intermediate economic theory or a course emphasizing the monetary system.

Accounting Minor—Undergraduate
A minor in accounting is available to any student whose major field or area of emphasis is outside of accounting. A minor in accounting consists of 9 hours of accounting course work numbered 300 or above. Given course prerequisites, this minor requires 15 to 18 semester hours.

**Aviation Management Major**
Department of Marketing and Small Business

**Required Courses:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Av. Mgt. 320, Introduction to Aviation</td>
<td>3</td>
</tr>
<tr>
<td>Av. Mgt. 420, General Aviation: Management and Marketing</td>
<td>3</td>
</tr>
<tr>
<td>Av. Mgt. 421, Airport Planning and Management</td>
<td>3</td>
</tr>
<tr>
<td>Av. Mgt. 422, Airline and Air Travel Management</td>
<td>3</td>
</tr>
<tr>
<td>Econ. 615, Economics of Transportation</td>
<td>3</td>
</tr>
<tr>
<td>Econ. 616, Economics of Air Transportation</td>
<td>3</td>
</tr>
<tr>
<td>Mkt. 604, Distribution Management</td>
<td>3</td>
</tr>
</tbody>
</table>

**Electives:**

- Av. Mgt. 222, Ground School | 2
- Av. Mgt. 223, Private Flight | 3

**Business Administration Major**

**Required Courses:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acct. 310, Financial Accounting II (3)</td>
<td>3</td>
</tr>
<tr>
<td>Acct. 320, Managerial Accounting II (3)</td>
<td>3</td>
</tr>
<tr>
<td>Acct. 410, Financial Accounting III (3)</td>
<td>3</td>
</tr>
<tr>
<td>Acct. 430, Taxation I (3)</td>
<td>3</td>
</tr>
<tr>
<td>Econ. 304, Managerial Economics (3)</td>
<td>3</td>
</tr>
<tr>
<td>Econ. 340, Money and Banking (3)</td>
<td>3</td>
</tr>
<tr>
<td>Econ. 661, Collective Bargaining and Wage Determination (3)</td>
<td>3</td>
</tr>
<tr>
<td>Econ. 672, Introduction to International Economics and Business (3)</td>
<td>3</td>
</tr>
<tr>
<td>Fin. 640, Financial Management (3)</td>
<td>3</td>
</tr>
<tr>
<td>Fin. 641, Investments (3)</td>
<td>3</td>
</tr>
<tr>
<td>Mgmt. 462, Leadership and Motivation (3)</td>
<td>3</td>
</tr>
<tr>
<td>Mgmt. 464, Organizational Communication (3)</td>
<td>3</td>
</tr>
<tr>
<td>Mgmt. 665, Organizational Development (3)</td>
<td>3</td>
</tr>
<tr>
<td>Mgmt. 667, Organizational Structure and Design (3)</td>
<td>3</td>
</tr>
<tr>
<td>Mgmt. 680, Decision Making (3)</td>
<td>3</td>
</tr>
<tr>
<td>Mgmt. 683, International Management (3)</td>
<td>3</td>
</tr>
<tr>
<td>Pers. 466, Personnel Management (3)</td>
<td>3</td>
</tr>
<tr>
<td>Mkt. 403, Marketing Research (3)</td>
<td>3</td>
</tr>
<tr>
<td>Mkt. 405, Consumer Behavior (3)</td>
<td>3</td>
</tr>
<tr>
<td>Mkt. 609, Marketing Programs (3)</td>
<td>3</td>
</tr>
</tbody>
</table>

Electives: Selected from any of the above or other upper-division courses in the Barton School of Business. These may be "concentrated" or spread over a number of different discipline areas.

**Economics Major**

Department of Economics
A major requires a minimum of 21 upper-division hours in economics beyond the college core. Within the 124 hours required for graduation, a maximum of 41 hours in economics is allowed, counting the courses in the college core. Students who plan to major in economics should consult with the undergraduate adviser in the Department of Economics. The following courses are required and must be included in the 124 hours:

**Course** | **Hrs.**
--- | ---
Econ. 301, Intermediate Macroeconomics | 3
Econ. 302, Intermediate Microeconomics | 3
Econ. 340, Money and Banking | 3
Upper-division electives in economics beyond the college core | 12

**Economics Minor.** A minor in economics is available to any student whose major field or area of emphasis is outside of economics. A minor consists of 15 hours of economics exclusive of Econ. 101G, 102Q and 231. Econ. 201Q and 202Q (or equivalent) must be included.

**Teaching of Economics.** Because Kansas Department of Education regulations governing the certification of secondary economics teachers are very specific and contain requirements beyond the economics major, students planning to be teachers of economics should contact a secondary social studies adviser in the
College of Education for program planning.

Entrepreneurship Major
Department of Marketing
and Small Business

The entrepreneurship major provides special training for students who may wish to establish their own enterprise or operate a new and rapidly growing business. The major also will be a useful preparation for those who expect to become involved with a family owned business or those who desire to take part in new business development or other innovative activities within larger organizations.

The major requires 21 upper-division hours, including 9 hours of core entrepreneurship courses, 3 hours of entrepreneurship experiential courses and 9 hours from a list of approved electives from within the Barton School of Business.

The core courses are Entre. 361, 465 and 668. Experiential courses include Entre. 491, 492 and 560. Electives are chosen from the following: Acct. 320, 430; B. Law 435, 436; Entre. 690; Fin. 640, 641; Mgmt. 462; Mkt. 404, 407, 601, 606; Pers. 466; RE 310, and Econ. 661.

Students interested in the bachelor’s degree program in entrepreneurship should contact the Center for Entrepreneurship for special counseling and scholarship information.

Entrepreneurship Minor. A minor in entrepreneurship is available to students at WSU. A minor consists of 15 hours including: Entre. 160Q, 361, 465, 560 and 668. Entre. 150 may be taken in place of Entre. 160Q or in addition to Entre. 160Q, but credit will be awarded for only one of the two courses.

Finance Major
Department of Finance, Real Estate and Decision Sciences

Required Courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acct. 640, Financial Management</td>
<td>3</td>
</tr>
<tr>
<td>Fin. 641, Investments</td>
<td>3</td>
</tr>
<tr>
<td>Fin. 643, Capital Markets and Financial Institutions</td>
<td>3</td>
</tr>
</tbody>
</table>

B. Law 436, Law of Business Associations
Econ. 631, Intermediate Business Statistics
Fin. 444, Contemporary Issues in Banking
Fin. 644, Commercial Bank Management
Fin. 645, Security Analysis and Valuation
Fin. 648, (Econ. 674), International Finance
RE 611, Real Estate Finance
RE 618, Real Estate Investment Analysis

Elective, any School of Business course numbered 400 or above

Bank Management Emphasis. Finance majors wishing to emphasize bank management should include the following courses in their major:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fin. 444, Contemporary Issues in Banking</td>
<td>3</td>
</tr>
<tr>
<td>Fin. 644, Commercial Bank Management</td>
<td>3</td>
</tr>
<tr>
<td>Econ. 540, Money and Banking</td>
<td>3</td>
</tr>
</tbody>
</table>

International Business Major
Department of Management

Required Courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fin. 648, International Finance</td>
<td>3</td>
</tr>
<tr>
<td>Mgmt. 561, Introduction to International Economics and Business</td>
<td>3</td>
</tr>
<tr>
<td>Mgmt. 683, International Management</td>
<td>3</td>
</tr>
<tr>
<td>Mkt. 601, International Marketing</td>
<td>3</td>
</tr>
</tbody>
</table>

Directed electives:

Two of the following courses selected in consultation with the student’s major adviser:

<table>
<thead>
<tr>
<th>Course</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Econ. 615, Economics of Transportation</td>
<td>6</td>
</tr>
<tr>
<td>Econ. 671, Economic Growth and Development</td>
<td>6</td>
</tr>
<tr>
<td>Geog. 510, World Geography</td>
<td>3</td>
</tr>
<tr>
<td>Mgmt. 492, Internship in Management</td>
<td>3</td>
</tr>
<tr>
<td>Mkt. 403, Marketing Research</td>
<td>3</td>
</tr>
<tr>
<td>Mkt. 407, Organizational Communication</td>
<td>3</td>
</tr>
</tbody>
</table>

Management Major
Department of Management

Seven courses selected from the following:

Course                  | Hrs. |
-------------------------|------|
Mgmt. 462, Leadership and Motivation | 3    |
Mgmt. 464, Organizational Communication | 3    |
Mgmt. 665, Organizational Development | 3    |
Mgmt. 667, Organizational Structure and Design | 3    |
Mgmt. 680, Decision Making | 3    |
Mgmt. 683, International Management | 3    |
Pers. 466, Personnel Management | 3    |
Pers. 468, Compensation Administration | 3    |
Pers. 664, Labor Relations | 3    |
Pers. 664, Labor Relations | 3    |

Marketing Major
Department of Marketing
and Small Business

Required Courses:

<table>
<thead>
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<tr>
<td>Mkt. 405, Consumer Behavior</td>
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</tr>
<tr>
<td>Mkt. 609, Marketing Programs</td>
<td>3</td>
</tr>
<tr>
<td>Electives, from the following:</td>
<td>6</td>
</tr>
<tr>
<td>Mkt. 404, Retail Management</td>
<td>3</td>
</tr>
<tr>
<td>Mkt. 407, Marketing for Service and Nonprofit Organizations</td>
<td>3</td>
</tr>
<tr>
<td>Mkt. 601, International Marketing</td>
<td>3</td>
</tr>
<tr>
<td>Mkt. 604, Distribution Management</td>
<td>3</td>
</tr>
<tr>
<td>Mkt. 606, New Product Marketing</td>
<td>3</td>
</tr>
<tr>
<td>Mkt. 607, Promotion Management</td>
<td>3</td>
</tr>
<tr>
<td>Mkt. 608, Selling and Sales Force Management</td>
<td>3</td>
</tr>
<tr>
<td>Electives, selected with consent of major adviser</td>
<td>6</td>
</tr>
</tbody>
</table>

Personnel Administration Major
Department of Management

Required Courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pers. 466, Personnel Management</td>
<td>3</td>
</tr>
<tr>
<td>Pers. 664, Labor Relations</td>
<td>3</td>
</tr>
<tr>
<td>Pers. 666, Selection, Training and Placement</td>
<td>3</td>
</tr>
<tr>
<td>Electives, from the following:</td>
<td>6</td>
</tr>
<tr>
<td>Mgmt. 462, Leadership and Motivation</td>
<td>3</td>
</tr>
<tr>
<td>Mgmt. 464, Organizational Communication</td>
<td>3</td>
</tr>
<tr>
<td>Mgmt. 663, Organizational Interactions</td>
<td>3</td>
</tr>
<tr>
<td>Mgmt. 665, Organizational Development</td>
<td>3</td>
</tr>
<tr>
<td>Mgmt. 667, Organizational Structures and Design</td>
<td>3</td>
</tr>
<tr>
<td>Electives, selected with consent of major adviser</td>
<td>6</td>
</tr>
</tbody>
</table>

Real Estate and Land Use Economics Major
Department of Finance, Real Estate and Decision Sciences

Required Courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>RE 310, Principles of Real Estate</td>
<td>3</td>
</tr>
<tr>
<td>RE 611, Real Estate Finance</td>
<td>3</td>
</tr>
</tbody>
</table>
The Master of Professional Accountancy program at The Wichita State University is designed to prepare qualified candidates for careers as professional accountants in public practice, industry, government and nonprofit organizations. The program is based on strong preparation in general education courses with special emphases on communication skills, mathematics and economics, and includes a broad exposure to the different aspects of business and management.

Students not possessing a bachelor's degree will receive both a Bachelor of Business Administration degree and a Master of Professional Accountancy degree at the time of graduation.

The MPA program requires a minimum of five years of full-time collegiate study, when beginning as a freshman. Students who decide to enter the program later in their academic careers should consult with the assistant director of the School of Accountancy to learn the approximate length of time it would take to earn the degree.

Professional Designations. Students interested in accounting may pursue several different professional designations. The designation Certified Public Accountant (CPA) requires that the candidate pass the Uniform CPA Examination and meet the requirements of Kansas law and the regulations of the Kansas State Board of Accountancy (or the relevant state of residence/practice, if not Kansas). The areas tested on the examination include auditing, business law, accounting theory and accounting practice.

The Certificate in Management Accounting (CMA) requires that the candidate pass the CMA examination and meet the requirements of the Institute of Certified Management Accountants. The areas tested include economics and business finance; organization and behavior, including ethical considerations; public reporting standards; auditing and taxes; internal reporting and analysis; and decision analysis, including modeling and information systems.

Preprofessional Curriculum

Students pursuing the Master of Professional Accountancy (MPA) are required to meet specified requirements for admission to the School of Accountancy. During the candidate's undergraduate work, the following requirements must be met:

1. The candidate must complete the general education requirements for The Wichita State University, plus additional nonbusiness courses, for 56 semester hours. The following courses are specifically required by the School of Accountancy and may be counted within this 56 hours:
   - Econ. 201Q and 202Q, Principles of Economics I and II
   - Engl. 210, Composition: Business
   - Engl. 685Q, Advanced Composition
   - Math. 111, College Algebra
   - Math. 144, Business Calculus
   - Phil. 144Q, Moral Issues
   - Comm. 111, Public Speaking

2. The candidate must complete a minimum of 28 hours of the following Barton School of Business Core requirements:
   - Acct. 210, Financial Accounting I
   - Acct. 220, Managerial Accounting I
   - Acct. 260, Introduction to Information Systems
   - DS 350, Introduction to Production Management
   - DS 495, Management Information Systems
   - Econ. 231, Introductory Business Statistics
   - Mkt. 300, Marketing
   - Mgmt. 360, Management and Organizational Behavior
   - Mgmt. 430, Business, Government and Society

   *Admission requirements for the CPA exam in Kansas specify a course in intermediate economic theory or a course emphasizing the monetary system.

3. The candidate must complete the following courses required by the School of Accountancy:
   - Preprofessional Accounting Core
   - Acct. 310 and 410, Financial Accounting II and III
   - Acct. 320, Managerial Accounting II
   - Acct. 430, Taxation I

   During the semester in which the preprofessional curriculum will be completed, the candidate for the MPA must apply for admission to the Graduate School. The GMAT should be taken during, or just prior to, this semester.
Professional Program
Candidates in the professional curriculum who have completed the minimum preprofessional curriculum as outlined above, must complete 59 hours in the following courses while maintaining an overall grade point average of 3.00 or better.

Course \( Hrs. \)

**Professional Accounting Core**
Acct. 510, Financial Accounting IV \( ........3 \)
Acct. 560, Accounting Information Systems I \( ........3 \)
Acct. 640, Auditing I \( ........4 \)
Acct. 890, Professional Seminar \( ........1 \)

**Accounting electives (800 level) \( ........15 \)**
B. Law 435 and 436, Law of Commercial Transactions and Business

**Associations \( ........6 \)**
DS 871, Multivariate Statistical Methods
or approved equivalent \( ........3 \)
Mgmt. 862, Organizational Behavior or approved equivalent \( ........3 \)
Mgmt. 885, Administrative Policy \( ........3 \)
Remaining Barton School of Business core requirements* \( ........6 \)

Other graduate electives \( ........12 \)

As a minimum, the candidate's total program must include 30 graduate-level hours, including 15 hours of accounting courses numbered 800 or above and a total of 20 semester hours of courses numbered 800 or above—excluding any courses which represent business common body of knowledge.

*See list of courses under Preprofessional Curriculum. Core courses taken after admission to the MPA program must be graduate level equivalent courses.

Associate of Science in Legal Assistant
A legal assistant program is offered through the Department of Finance, Real Estate and Decision Sciences to prepare students for law-related employment in law firms, corporations and government. The 64-hour program is geared to the role concept of the legal assistant who is not a lawyer but who is trained to handle extensive professional responsibilities under the supervision of a lawyer. Some of the tasks a graduate of the program might be expected to perform are legal research, preparing briefs, interviewing clients and witnesses, preparing corporate instruments, drafting wills and probate instruments, drafting pleadings and interrogatories, filing papers, assisting in trial preparation and numerous other matters of challenge and responsibility. The program has been granted approval by the American Bar Association.

Degree Program Admission
Students seeking admission to the Legal Assistant Program must meet the general entrance requirements of the University, the initial requirements of the Barton School of Business and the special requirements of the Legal Assistant Program.

Initial admission to the Barton School of Business requires (1) completion of 24 semester credit hours, (2) a cumulative grade point average of 2.250 and (3) completion of six hours of English composition, three hours of communication and three hours of college algebra with at least a grade of C in each course. Students may apply for admission to the Legal Assistant Program during the semester that these three requirements will be completed.

Admission to the program involves these steps: (1) completion of an application for admission, including documentation of the GPA and specific course work listed above, and (2) completion of an admissions interview with the director or associate director of the program. In the event there are more applicants than the program can reasonably accommodate, the program reserves the right to set up admissions quotas. In such circumstances, applicants will be evaluated on the basis of academic record. Thus far, this procedure has not been necessary.

The associate director/adviser is available to counsel beginning as well as advanced students, to ensure their basic skills and general education course work progress toward the legal courses in a logical and meaningful way. Appointments for preregistration are recommended.

Nondegree and Single Course Admission
Students not pursuing the degree program are required to complete a special admission form. The student must identify the particular course or courses, the reason for seeking admission and the background which is the basis for request for waiver of any stated prerequisites.

Such special admissions are evaluated against the following criteria: (1) whether the purpose of the student conforms to the objectives of the program, (2) whether the student has the background necessary to handle the course and not impede the class and (3) whether there is space available.

Degree Requirements
The degree requirements for the Associate of Science in Legal Assistant are summarized as follows:

**Course \( Hrs. \)**

I. General Education Requirements (30 hours)
Engl. 101 and 102, College English I and II \( ........6 \)
Comm. 111, Public Speaking \( ........3 \)
Division A—Humanities and Fine Arts "G" or "Q" course electives \( ........3-12 \)
Division B—Social and Behavioral Sciences "G" or "Q" course electives \( ........3-12 \)
Division C—Mathematics and Natural Sciences "G" or "Q" course electives \( ........3-12 \)

II. Professional Curriculum (34 hours)
A. Required Courses (16 hours)
B. Law 130Q, Introduction to Law \( ........3 \)
Legal 231, Introduction to Paralegalism \( ........1 \)
*Legal 231A, Legal Research and Writing I \( ........3 \)
*Legal 233, Legal Practice \( ........3 \)
*Legal 240, Substantive Law: Torts \( ........3 \)
Acct. 210, Financial Accounting I \( ........3 \)
B. Required Courses or Validated Equivalents (6 hours)
Legal 238, Legal Assistant Internship \( ........3 \)
*Legal 244, Legal Assistant Computer Skills \( ........3 \)
Legal assistant internship is a requirement for students who do not have the law-related work experience equivalent. Proficiency in utilization of a microcomputer is also a graduation requirement. Work experience in a law office may be validated to satisfy the internship requirement. Computer skills may be validated to satisfy the computer requirement. Academic credit will not be granted where these requirements are met by validation.

C. Professional Electives (12-18 hours)
*Legal 232, Legal Aspects of Business Organizations \( ........3 \)
*Legal 234, Estate Administration \( ........3 \)
*Legal 235, Law Office Management and Technology \( ........3 \)
*Legal 236, Litigation II \( ........3 \)
*Legal 237, Family Law \( ........3 \)
*Legal 239, Special Topics \( ........3 \)
*Legal 241, Legal Research and Writing II \( ........3 \)
*Legal 243, Property Law \( ........3 \)
B. Law 431, Legal Environment of Business \( ........3 \)
B. Law 435, Law of Commercial Transactions \( ........3 \)
Course Descriptions

Business courses numbered 100 to 299 are designed primarily for freshmen and sophomores, but students from other classes may be admitted for lower-division credit. Graduate students may not take these courses for graduate credit.

Business courses numbered 300 to 499 are available only to juniors and seniors. Graduate students may not take these courses for graduate credit.

Business courses numbered 500 to 699 are available to juniors and seniors, but graduate students may also receive graduate credit for these courses.

Business courses numbered 700 to 799 are structured primarily for graduate students, but undergraduate, upper-division students may be admitted if they meet course prerequisites.

Courses numbered 800 to 899 are designed for graduate students only, and students may not be admitted to these courses unless they have been admitted to the Graduate School. (See the Academic Information section of the Catalog for special conditions under which seniors may be admitted to graduate courses.)

Accounting

School of Accountancy

Lower-Division Courses

210. Financial Accounting I. (3). The study of accounting as a means of communicating financial information about the activities of business enterprises. Emphasizes concepts and principles underlying the measurement of income and financial position and how this information may be used to evaluate the progress of a firm. Prerequisites: sophomore standing and Math. 109 or Math. 111.

220. Managerial Accounting I. (3). The study of accounting in terms of management's information requirements. Emphasizes the use of accounting in planning and controlling a firm's activities. Prerequisites: Acct. 210, Math. 109 or 111; sophomore standing.

260. Introduction to Information Processing Systems for Business. (3). Introduces the use of electronic information processing systems in solving business problems and meeting the informational needs of the modern business environment. Prerequisites: sophomore standing, Math. 109 or 111, Acct. 210 and admission to the Barton School of Business or permission of the School of Accountancy.

Upper-Division Courses


320. Managerial Accounting II. (3). An in-depth study of the accumulation and allocation of cost data for determining the value of goods and services produced, and for using these data to analyze operations. Prerequisites: junior standing, Math. 109 or 111, Acct. 220, and Acct. 260 or concurrent enrollment.

390. Special Group Studies in Business. (1-3). Repeatable for credit with School of Accountancy consent.


436. Taxation I. (3). An examination of the federal income tax law relating to individual income taxation. Prerequisites: Acct. 210 and 260 or current enrollment; Math. 109 or 111; junior standing.

491. Independent Study in Accounting. (1-3). Individual study for Cr/Ncr only. Prerequisites: 2.75 grade point average in accounting, junior standing and School of Accountancy consent.

Courses for Graduate/Undergraduate Credit


560. Accounting Information Systems I. (3). A study of the content, design and controls of accounting systems, emphasizing the use of computers for processing financial data. Prerequisites: Acct. 220 and 260; Math. 109 or 111; senior standing.

640. Auditing I. (4). A study of the auditor's attest function, emphasizing auditing standards and procedures, independence, legal responsibilities, codes of ethical conduct and evaluation of accounting systems and internal control. Prerequisites: Acct. 260, 410, 560, Math. 109 or 111; senior standing.

690. Seminar in Selected Topics. (1-3). Repeatable for credit with School of Accountancy consent.

Courses for Graduate Students Only

Where a course is indicated as a prerequisite to a second course, all prerequisites to the earlier course(s) also apply to the later course(s).

800. Financial Accounting. (3). A study of the basic structure of accounting, income determination, asset valuation, liability recognition and accounting for ownership equity. Includes the interpretation and analysis of financial statements. May not be taken for credit in the School of Accountancy. Prerequisite: no previous credit in accounting or permission of the School of Accountancy.

801. Managerial Accounting. (3). Examines the use of accounting data to analyze management problems. Covers concepts of cost analysis, return on investment analysis, and operations and capital budgeting. May not be taken for credit in the School of Accountancy. Prerequisite: Acct. 800 or equivalent.

810. Financial Accounting V. (3). A continuation of the financial accounting sequence. Emphasizes accounting for leases, pensions, foreign currency and futures contracts; segment reporting; insolvency; and calculating earnings-per-share. Prerequisites: graduate standing and Acct. 510 (or equivalent), or permission of the School of Accountancy.

815. Theoretical Foundations of Accounting. (3). A systematic treatment of the basic concepts and methodology of accounting theory and their application to problems of income determination and asset/liability valuation. Prerequisites: graduate standing and Acct. 510 (or equivalent), or permission of the School of Accountancy.

820. Managerial Accounting III. (3). Advanced study of the use of accounting information in financial policy decisions, profit planning and control, quantitative analysis of financial data and capital budgeting. Includes the application of selected quantitative methods of accounting. Prerequisites: graduate standing and Acct. 320 (or equivalent) or permission of the School of Accountancy.

825. Managerial Accounting IV. (3). Advanced study of theoretical concepts underlying cost accounting, emphasizing the nature of business costs, establishing a conceptual framework for cost and managerial accounting and selected problem areas in cost determination and analysis. Prerequisites: graduate standing and Acct. 320 (or equivalent), or permission of the School of Accountancy.

830. Taxation II. (3). A study of the federal tax law as it applies to corporations, partnerships, estates, trusts and gifts. Prerequisites: graduate standing and Acct. 430 (or equivalent), or per-
Upper-Division Courses

320. Introduction to Aviation. (3). A study of all of the branches of aviation: aircraft manufacturing, fixed base operations, airport management, government activities, airline operations and military aviation. Covers employment opportunities in the field. Representatives from the various facets of the aviation industry and government participate. Prerequisite: junior standing.


420. General Aviation Management and Marketing. (3). An overview of general aviation and its relations with the total aviation industry, including the worldwide organization of the general aircraft industry, its marketing strategies, its social and environmental impact and the economics of corporate aircraft utilization. Prerequisites: Mkt. 350 and Mgmt. 360.

421. Airport Planning and Management. (3). The principles and procedures pertaining to the planning of airport facilities, plus an understanding of the techniques of airport management, including airport design, financing of construction, services provided, income rate setting, accounting procedures, personnel and public relations, marketing and maintenance. Also includes current problems in certification, security, safety, land acquisition, zoning and state and federal participation in airport development. Prerequisites: DS 350, Fin. 340, Mkt. 300 and Mgmt. 360.

422. Airline and Air Travel Management. (3). The organizational and financial structure of airline companies, their operating policies, marketing policies, equipment selection, personnel and public relations and a review of the pertinent federal and international regulations. It covers both air cargo and passenger operations. It also contains a section on the organization and operation of air travel agencies and their relations with airlines. Prerequisites: DS 350, Fin. 340, Mkt. 300 and Mgmt. 360.

491. Independent Study. (1-5). Offered Cr/ NCr only. Closed to graduate credit. Prerequisites: junior standing and 2.750 GPA in aviation management.

492. Internship in Aviation Management. (1-3). Offered Cr/NCr only. Prerequisites: junior standing, 2.750 GPA in aviation management and departmental consent.

Courses for Graduate/Undergraduate Credit

690. Seminar in Selected Topics. (1-5). Repeatable with departmental consent. Prerequisite: junior standing.

700. Workshop in Aviation Management. (1-4). Prerequisite: junior standing.

Business Law

Department of Finance, Real Estate and Decision Sciences

Lower-Division Courses

150Q. Introduction to Law. (3). A basic introduction to law. Considers the nature and functions of law, the structure of the American legal system and legal processes and procedures. Also surveys the major areas of substantive law. Open to students with a general interest in law. Students interested in the Legal Assistant Program should enroll concurrently in Legal 230.

Upper-Division Courses


431. Legal Environment of Business. (3). An introduction to the legal environment within the realm of regulatory law and its business context. Prerequisites: junior standing.

435. Law of Commercial Transactions. (3). The law, and the major frameworks of private and public transactions, business organizations, business torts and crimes, and regulatory law. Ethical and social responsibility considerations are addressed as an integral aspect of legal regulation. Prerequisite: junior standing.


437. Regulatory Law. (3). An introduction to the realm of regulatory law and its business context. Considers the legal principles common to most regulatory agencies. Topics considered include trade regulation, occupational health and safety, product safety and environmental law. Prerequisite: junior standing.

491. Independent Study. (1-5). Offered Cr/NCr only. Closed to graduate credit. Prerequisites: junior standing and 2.750 GPA in business law.

492. Internship in Business Law. (1-3). Offered Cr/NCr only. Prerequisites: junior standing, 2.750 GPA in business law and departmental consent.

Courses for Graduate/Undergraduate Credit

690. Seminar in Selected Topics. (1-5). Repeatable with departmental consent. Prerequisite: junior standing.

700. Workshop in Business Law. (1-4). Prerequisite: junior standing.
which the business system operates. Considers
the functions of law in relation to the business
system, the institutions and processes involved
in the interaction between business, society
and government and the major frameworks of
private and public law. Emphasizes the realm
including the ethical and social responsibility
in the interaction between business, society
aspects of business behavior.

48. Seminar in Special Topics. (1-3). Repeat­
able with departmental consent.

49. Directed Studies. (1-5). Prerequisite: 
departmental consent.

Decision Sciences

Department of Finance, Real Estate and
Decision Sciences

Lower-Division Course

190. Selected Topics. (1-3). Repeatable with
departmental consent.

Upper-Division Courses

360. Introduction to Production and Opera­
tions Management. (3). An overview of the
concepts, tools and techniques used in making
managerial decisions related to the production
or operations function of an organization. Top­
ics include facility location and layout, fore­
casting, production planning, quality control,
inventory models, forecasting and management.
Prerequisites: Econ. 231 and Math. 144, or equivalent, and junior standing.

390. Special Group Studies in Decision Sci­
ces. (1-3). Repeatable with departmental consent.

419. Independent Study. (1-5). Offered Cr/INCr
only. Closed to graduate credit. Prerequisites: 
junior standing and 2.75 GPA in decision sci­
ces.

492. Internship in Decision Sciences. (1-3).
Offered Cr/INCr only. Prerequisites: junior standing, 2.75 GPA in decision sciences and
departmental consent.

495. Management Information Systems for
Business. (3). A study of business information
systems for management decision making and
control. Includes coverage of system compo­
nents, controls and application. Prerequisite:
one course in programming or equivalent, or DS 190 and junior standing.

Courses for Graduate/Undergraduate Credit

575. Decision Making Techniques. (3). An
introduction to the quantitative techniques
commonly used for managerial decision mak­
ing and their application to problems in such
areas as production, distribution and finance.
Includes linear, integer, goal and dynamic pro­
gramming, transportation models, network
models, queueing theory and simulation. Pre­
rerequisite: DS 350.

an in-depth view of the long-term design
aspects of operations systems. Includes process
analysis and design, production control infor­
mation systems, facilities planning, materials
handling system, job design, personnel plan­
ing and scheduling and current issues. Pre­
rerequisite: DS 350.

an in-depth analysis of the short-term or oper­
a tional aspects of goods- or service-producing
systems. Includes forecasting methods, inven­
tory control models, material requirements
planning, aggregate planning and scheduling
and current issues. Prerequisite: DS 350.

690. Seminar in Selected Topics. (1-5). Repeat­
able with departmental consent. Prerequisite: 
junior standing.

750. Workshop in Decision Sciences. (1-4).
Prerequisite junior standing.

Courses for Graduate Students Only

850. Production and Operations Management.
(3). Concepts for planning and controlling
the production of either goods or services.
Includes linear programming, scheduling,
quality control, inventory models and waiting
line models. Not open to students with credit
in DS 350. Prerequisites: calculus and statistics.

851. Intermediate Production Management.
(3). Theory of productive systems, decision
making under uncertainty and advanced tech­
nological forecasting methods for business and
industry. Application of forecasting methods
and some operations research models to real­
world productive systems. Prerequisite: DS
350 or 851.

871. Multivariate Statistical Methods. (3). A
study of selected multivariate statistical meth­
ods used in support of modern decision mak­
ing. Includes multivariate hypothesis testing,
multiple regression, correlation, analysis of
variance and covariance and discriminant
analysis. Prerequisite: Econ. 870 or Econ.
231.

872. Advanced Statistical Analysis. (3). Exams­
tines topics such as sample design, chi square,
variance analysis and correlation and regres­
sion analysis from conceptual and decision­
making points of view. Prerequisite: DS 871.

874. Management Information Systems for
Business. (3). A study of business information
systems for management decision making and
control. Includes coverage of system compo­
nents, controls and application. Includes an
introduction to a programming language.

875. Management Science. (3). Provides quan­
titative bases from which the student may
develop analytical abilities for use as a decision
maker. Includes mathematical programming,
game theory, forecasting, queuing theory and
simulation. Prerequisite: calculus.

876. Advanced Management Science. (3). An
in-depth examination of selected management
science models. Includes advanced inventory
and quality control topics, goal programming
and other current decision-making techniques.
Prerequisite: DS 875 or departmental consent.

884. Database Planning and Management. (3).
Prepares students to deal with issues in plan­
ing and managing organization-wide inte­
grated databases. Emphasizes logical database
design and relational database implementa­
tion. Includes SQL, assuring database integri­
ty, database conversion, database administration
and data management for computer integrated
manufacturing. Prerequisite: DS 874 or instruc­
tor's consent.

890. Seminar in Special Topics. (1-3). Repeat­
able with departmental consent.

891. Directed Studies. (1-6). Prerequisite: 
departmental consent.

893. Special Project in Decision Sciences. (1­
4). A special project including original case
research, supervised internships or field
research. Prerequisite: approval of the MS
Committee. Open only to MS in administration
candidates.


Economics

Department of Economics

Courses in the economics department
are offered in the following subject areas.
Since course descriptions are listed in
numerical sequence, the following sum­
mary is presented to assist in locating
courses by subject area.

General studies—Econ. 101G
Principles and theory—Econ. 102Q, 201Q, 202Q, 203H, 204H, 301, 302,
304, 605, 801, 802, 803, 804

History and comparative systems—Econ.
622, 625, 627

International organization and regulated
industries—Econ. 614, 615, 616, 617, 814

History and comparative systems—Econ.
622, 625, 627

Statistics and econometrics—Econ. 231,
602, 631, 831

Monetary and financial economics;
money and banking—Econ. 340, 640, 840,
841, 847

Public finance—Econ. 653, 760, 853

Labor and manpower economics—Econ.
660, 661, 662, 663, 861

Economic growth and development; interna­tional economics—Econ. 671, 672,
674, 870

Urban, environmental and regional eco­
nomics—Econ. 688, 885

Directed study; thesis—Econ. 491, 692,
750, 891, 892, 895, 896.

Lower-Division Courses

101Q. The American Economy. (3). Division B
course/elective. An examination of the basic
economic forces that affect the American eco­
omy today, the historical evolution of these
forces and public policy issues resulting from
these forces. Not open to upper-division stu­
dents in the Barton School of Business. Not a
substitute for Econ. 201Q and/or Econ. 202Q.

102Q. Consumer Economics. (3). An examina­
tion of the consumer's role in the economy.
The study of market organization and its
impact on consumers, a discussion of informa­
tion sources for consumers and an analysis of
the programs for consumer protection are
included. Not open to upper-division students
in the Barton School of Business.
An introduction to determinants of national income, employment, and economic growth.

An introduction to price and distribution analysis. Market structure and performance, contemporary issues and public policy also are included. Prerequisite: Econ. 201Q.

A general survey of economic method, character and scope, and basic microeconomic and macroeconomic principles with applications aimed at helping the student develop an analytic framework for interpreting economic events, trends, institutions and public policy. Includes an analysis of resource use, price, and output determination, the level of national income, and the general price level, business fluctuations, the monetary and banking system, international trade, economic growth and development. Open only to honors students.

A seminar on selected topics of current interest in economics that analyzes major economic problems of the day as a guide to making public policy decisions. Included are the economics of environmental control; externalities, public goods, social costs and their effects in the market system; related problems such as urban development and economic growth, inflation, unemployment, concentration of economic power, depletion of resources, pollution and conservation. Open only to honors students. Prerequisite: Econ. 203H.

An introduction to statistical inference, estimation and hypothesis testing. Includes measures of location and dispersion, probability, sampling distributions, discrete and continuous probability functions, nonparametric methods, elements of Bayesian decision theory, linear regression and correlation and time series analysis. Prerequisite: Math. 109, 111 or 112.

An introduction to determinants of national income, employment, and economic growth. After a study of international economy, the operation of the financial system, and related topics are analyzed within this framework. Prerequisite: Econ. 202Q and junior standing.

Courses for Graduate/Undergraduate Credit

An introduction to statistical inference, estimation and hypothesis testing. Includes measures of location and dispersion, probability, sampling distributions, discrete and continuous probability functions, nonparametric methods, elements of Bayesian decision theory, linear regression and correlation and time series analysis. Prerequisite: Math. 109, 111 or 112.

An introduction to microeconomic theory to the solution of business problems. Prerequisites: Econ. 202Q, one course in calculus and junior standing.

An introduction to microeconomic theory to the solution of business problems. Prerequisites: Econ. 202Q, one course in calculus and junior standing.

An introduction to microeconomic theory to the solution of business problems. Prerequisites: Econ. 202Q, one course in calculus and junior standing.

A study of money, credit, inflation and the structure and role of the commercial banking and Federal Reserve systems. Includes the relationship between banks and other financial institutions and the role of money in determining the level of economic activity and prices. Prerequisites: Econ. 201Q and junior standing.

A study of the regression model with extensions, analysis of variance models and other related statistical methods. Emphasizes application to business and economic data. Prerequisites: Econ. 201Q and junior standing.

A study of the regression model with extensions, analysis of variance models and other related statistical methods. Emphasizes application to business and economic data. Prerequisites: Econ. 201Q and junior standing.

A study of monetary problems and policy. Includes debt management policies and the structure of interest rates. Prerequisites: Econ. 202Q, 340 and junior standing.

An analysis of fiscal institutions and decision making in the public sector of the American economy, budget planning and execution, taxation, debt and fiscal policy. Prerequisites: Econ. 202Q and junior standing.

A study of the regression model with extensions, analysis of variance models and other related statistical methods. Emphasizes application to business and economic data. Prerequisites: Econ. 201Q and junior standing.

A study of monetary problems and policy. Includes debt management policies and the structure of interest rates. Prerequisites: Econ. 202Q, 340 and junior standing.

A study of economic thought, the factors that influence this thought and its impact upon the social and economic development of the modern world. Prerequisites: Econ. 202Q and junior standing.

A study of both competitive and noncompetitive market structure, conduct and performance, with special emphasis on related public policy, such as antitrust. Prerequisites: Econ. 202Q and junior standing.

A study of economic characteristics of transportation markets, problems and policies. Prerequisites: Econ. 202Q and junior standing.

A study of economic characteristics of transportation markets, problems and policies. Prerequisites: Econ. 202Q and junior standing.

A study of both competitive and noncompetitive market structure, conduct and performance, with special emphasis on related public policy, such as antitrust. Prerequisites: Econ. 202Q and junior standing.

A survey of leading growth theories, emphasizing differences in pricing resource allocation, distribution of income and economic growth. Open only to honors students. Prerequisites: Econ. 202Q and junior standing.

A survey of leading growth theories, emphasizing differences in pricing resource allocation, distribution of income and economic growth. Open only to honors students. Prerequisites: Econ. 202Q and junior standing.

A study of the economy's role in economic growth and development. Includes the concepts of aggregate demand and aggregate supply. After developing theoretical foundations for these, policy applications are discussed, including such policy issues as unemployment, inflation, government and international trade deficits and interest rates. Prerequisites: Econ. 202Q and junior standing.

A study of economic growth and development. Includes the concepts of aggregate demand and aggregate supply. After developing theoretical foundations for these, policy applications are discussed, including such policy issues as unemployment, inflation, government and international trade deficits and interest rates. Prerequisites: Econ. 202Q and junior standing.

A survey of leading growth theories, emphasizing differences in pricing resource allocation, distribution of income and economic growth. Open only to honors students. Prerequisites: Econ. 202Q and junior standing.

A survey of leading growth theories, emphasizing differences in pricing resource allocation, distribution of income and economic growth. Open only to honors students. Prerequisites: Econ. 202Q and junior standing.
multinational firm within that environment are
explored. Prerequisites: Econ. 202Q and junior
standing.

574. International Finance. (3). Cross-listed as
Fin. 648. The study of foreign exchange, bal-
ce of payments, the international monetary
system and the world's money and capital
markets and their relationships with the finan-
cial operations of multinational firms. Also
examines relevant aspects of international
financial management through a series of case
studies. Prerequisites: Fin. 340, Econ. 202Q and
junior standing.

680. Economics of Energy and Natural
Resources. (3). A study of the business and
economic aspects of energy and natural
resources problems. Includes energy demand
and supply, the price of energy, energy indus-
try characteristics and government regulations,
conservation, environmental problems and
public policies. Uses statistical data extensively
to evaluate the past and present energy and
natural resources situations and the trends for
the future. Emphasizes simple economic concepts
and theories to interpret the facts and to assess
the impact of various public policies on the use
of energy and natural resources. Prerequisite:
Econ. 202Q or instructor's consent.

688. Urban Economics. (3). A survey of the
economic structure and problems of urban
areas on both the microeconomic and macro-
economic levels. Stresses the application of
regional economic analysis in the study of
urban areas as economic regions. Prerequisites:
Econ. 201Q and 202Q, or Econ. 800, and junior
standing.

Repeatable for credit with departmental con-
sent. Prerequisite: junior standing.

750. Workshop in Economics. (1-4). Prerequi-
site: junior standing.

760. Local Government Finance. (3). Cross-
listed as Pol. S. 760. An analysis of state and
local government expenditure and revenue
systems, with an introduction to state and local
financial administration. Prerequisites: Econ.
282Q and a course in statistics or instructor's
consent.

Courses for Graduate Students Only

800. Analysis of Economic Theory. (3). An
intensive analysis of micro- and macroeco-
omic principles. Not for graduate credit in the MA
program in economics. Prerequisite: depart-
mental consent.

801. Macroeconomic Analysis. (3). An inten-
sive analysis of contemporary literature and
problems of national income analysis. Prerequi-
sites: Econ. 301 and one course in calculus.

802. Microeconomic Analysis. (3). An inten-
sive analysis of contemporary literature and
problems in the areas of production, pricing
and distribution. Prerequisites: Econ. 302 or
804 and one course in calculus.

803. Analysis of Business Conditions. (3). A
study of economic forecasting and its relation-
ship to macroeconomic analysis. Not for grad-
uate credit in the MA program in economics.
Prerequisites: Econ. 80C or equivalent and one
semester of introductory statistics.

804. Managerial Economics. (3). A survey of
theoretical and analytical tools of economics
that are useful in decision making by man-
agers. Not for graduate credit in the MA pro-
gram in economics. Prerequisites: Econ. 202Q
or 800 and one course in calculus.

814. Seminar in Industrial Organization
and Public Policy. (3). A study of business and
economic organization and structure, market
operation, and performance and public policy
with special reference to the U.S. economy.
Repeatable for credit with departmental con-
sent. Prerequisite: Econ. 302, 614 or 804.

830. Statistical Methods for Business. (3).
An examination of statistical concepts and meth-
ods applicable to business decision making.
Includes probability theory, point and interval
estimation, hypothesis testing, regression anal-
ysis, analysis of variance and selected nonpara-
metric techniques. Not open to students with
credit in Econ. 231 or equivalent. Not for grad-
uate credit in the MA program in economics.
Prerequisite: calculus.

831. Introduction to Econometrics. (3).
Analysis of time series, multiple regression, mul-
tiple and partial correlation, analysis of variance
and introduction to econometric techniques.
Prerequisites: Econ. 631 and one course in
calculus.

840. Seminar in Monetary Theory. (3). An
examination of neoclassical and contemporary
monetary theories. Includes an analysis and an
evaluation of current monetary policies. Repeatable for credit with departmental con-
sent. Prerequisites: Econ 202Q and 340.

841. Money and Capital Markets. (3). Theoret-
ical and empirical studies of rate of return on
financial assets available in credit, currency,
futures and options, equity capital, and inter-
national capital markets. An examination of
concepts and techniques for measuring and
managing financial risk. Prerequisite: Econ.
340 or equivalent.

847. Speculative Markets. (3). Cross-listed as
Fin. 847. Analysis of the markets for specula-
tive securities such as futures, options and
commodities. Explores underlying theories
explaining speculative markets in which such
securities are traded. Discusses trading strate-
gies such as hedging and arbitrage. Prerequi-
site: Fin. 840 or equivalent.

853. Seminars in Public Finance. (3). An anal-
ysis of theoretical and applied aspects of public
finance in the American and foreign econo-
 mies. Explores selected topics of current
and permanent importance. Repeatable for
credit with departmental consent. Prerequisite:
Econ. 653.

(3). An intensive analysis of contemporary
problems in the field of labor. The specific
nature of the problems is determined by the
interest of those enrolled in the course. Repeat-
able for credit with departmental consent. Prereq-
quisite: instructor's consent.

870. Seminar in International Trade and
Finance. (3). Cross-listed as Fin. 820. A seminar
in theoretical concepts and contemporary
issues of international economics as
finance. Includes foreign exchange market
rates, Arab oil dollars in the
temporary world monetary system, transborder
problems, and the common market, etc. Prerequisite: Econ.
574, Fin. 645 or instructor's consent.

883. Seminar in Environmental Quality Con-	roel. (3). Examination of actual problems, pre-
cepts and/or current approaches to envi-
mental quality control. Takes a critical look at
current happenings and trends. Prerequisite:
instructor's consent.

891. Directed Study. (1-3). Individual study of
various aspects and problems of economics.
Repeatable for credit with departmental con-
sent. Prerequisite: graduate standing and
departmental consent.

892. Group Studies in Economics. (1-3)
Repeatable for credit. Prerequisite: departmental
consent.

895. Thesis Research. (1-2). Thesi-

Entrepreneurship

Department of Marketing
and Small Business

Lower-Division Courses

160Q. Introduction to Entrepreneurship. (3).
Division B course/elective. An introductory
course designed not only to familiarize the stu-
dent with the world of small business but also
to analyze the personal strengths and weak-
nesses as they relate to launching an
entrepreneurial career. Consideration is given to
the elementary concepts of planning, financ-
ing, starting and managing a small
business.

Upper-Division Courses

361. Venture Creation. (3). Course helps the
student explore various ways to own a busi-
ness including starting a new business, buying
a franchise or buying an existing business. Stu-
dents work in teams to identify a product or
service need of their fellow WSU students or
the larger Wichita community. They develop
a simplified business plan to start a profitable
business to meet the needs identified. Prereq-
quisites: Mkt. 300, Fin. 340 and Mgmt. 360 or
instructor's consent.

465. The Management of Growth. (3). Course
emphasizes the techniques of managing a new
business during early growth and develop-
mation, from start-up to efficient ongoing opera-
tions. Covers (1) management concepts, (2)
marketing techniques, (3) record-keeping sys-
tems and procedures, (4) new product strate-
gies and (5) new and small business finance.
Prerequisites: Acc. 210-220, Mkt. 300, Mgmt.
360 and junior standing.
491. Independent Study in Entrepreneurship. (1-5). Offered Cr/NcR only. Closed to graduate credit. Prerequisites: junior standing and 2.750 GPA in entrepreneurship courses.

492. Internship in Entrepreneurship. (1-3). Offered Cr/NcR only. Prerequisites: junior standing, 2.750 GPA in entrepreneurship and departmental consent.

Courses for Graduate/Undergraduate Credit
560. Consulting with Small Enterprise. (3). Gives hands-on experience consulting with an existing small business. Students work with the owner in teams under the guidance of the instructor to identify the problem, gather information relevant to the problem, propose solutions to the problem and help the owner implement agreed upon solutions. The student gains a personal knowledge of the lifestyle of an entrepreneur, both pro and con, as well as experienced-based knowledge about various aspects of managing a small business. Prerequisites: Mkt. 300, Fin. 340, Mgmt. 360, senior standing. Preferred Entree 465 also be taken.

668. Feasibility Analysis. (3). Explores such advanced subjects as leveraged buy outs, R&D limited partnerships, private placements of stock, role of the entrepreneur in economic development, marketing strategy for smaller businesses and strategic planning during early growth stages. The student prepares a business plan and is required to present the plan for evaluation by a panel of academics from various business disciplines. Prerequisite: Entree 361 or instructor’s consent.

690. Special Topics in Entrepreneurship. (3). Advanced course with in-depth discussion of emerging topics within the field of entrepreneurship. Topics rotate, allowing the student to repeat the class one time. Prerequisites: Entree 668, 465, senior standing.

750. Workshop in Entrepreneurship. (1-4). Prerequisite: junior standing.

Courses for Graduate Students Only
868. New Venture Feasibility Seminar. (3). Focuses on directing students in the appropriate methods of selecting financial sources and in raising seed capital through the preparation of a comprehensive feasibility study. Covers (1) sources of capital, such as venture capitalists, investment bankers, banks and creative forms of financing; (2) marketing opportunity analyses; (3) pro forma development; (4) feasibility decision making and (5) actual preparation of the loan package. Prerequisite: Acc 800 or its equivalent, or approval of the instructor. Not open to students with credit in Entree 668.

869. Entrepreneurship and Innovation within Organizations. (3). Addresses trends, current status and success factors in the area of innovation and entrepreneurship within organizations. Principles examined are applicable to any organization, large or small, private or public, by those persons who wish to create change and innovate within the existing structure. Covers (1) foundations of entrepreneur.

ship; (2) barriers to change; (5) entrepreneurial characteristics of individuals; (4) creative thinking and forced deactivation methods; (5) “entrepreneurship”—the need for it, definition, methods, favorable environment and rewards; (6) examples of entrepreneurial strategies, policies and practices for organizations; and (3) the entrepreneurial society, a growing way of life. Prerequisites: open to all students fully admitted to graduate programs in the Barton School of Business and instructor’s approval.

890. Seminar in Special Topics. (1-3). Repeatable with departmental consent.

891. Directed Studies. (1-5). Prerequisite: departmental consent.

893. Special Project in Entrepreneurship. (1-4). A special project including original case research supervised internships or field research. Prerequisites: open to all students fully admitted to graduate programs in the Barton School of Business and instructor’s approval.

Finance
Department of Finance, Real Estate and Decision Sciences

Lower-Division Courses
140Q. Personal Finance. (3). Division B course/elective. Management of the cash flows experienced by individuals and families. Analysis of alternative strategies to meet individual financial goals through various investment media with emphasis given to risks and returns. Exposes the student to a set of tools that can be applied in personal financial management to provide a flexible and relevant framework for future decision making.

190. Select Topics. (1-3). Repeatable with departmental consent.

Upper-Division Courses

348. Introduction to Insurance. (3). A basic study of both property/casualty and life/health insurance. Analysis of risk and the ways to treat both personal and business loss exposures. Study of the contracts, rate making and services of the insurance business as well as the marketing and regulation of both private and governmental insurance. Prerequisite: junior standing.


444. Contemporary Issues in Banking. (3). A survey of contemporary issues facing the U.S. commercial banking system. Course content varies according to the timeliness of various issues. Course is not only for those planning a career in banking but for anyone interested in current trends and issues in banking. Prerequisite: Fin 340.

491. Independent Study. (1-6). Offered Cr/NcR only. Closed to graduate credit. Prerequisites: junior standing and 2.750 GPA in finance.

492. Internship in Finance. (1-3). Offered Cr/NcR only. Prerequisites: junior standing, 2.750 GPA in finance and departmental consent.

Courses for Graduate/Undergraduate Credit
640. Financial Management. (3). An exploration of the problems and operations for which the financial officer is responsible, emphasizing controversial aspects of financial analysis. Prerequisites: Fin. 340, six hours of accounting or departmental consent and junior standing.


643. Capital Markets and Financial Institutions. (3). An introduction to the capital markets system. Studies the management and operations of financial institutions. Each major type of financial institution is viewed in the context of its competitive environment with respect to both asset and liability management. Prerequisites: Fin. 340 and junior standing. Credit in Econ. 340 is strongly recommended.

644. Commercial Bank Management. (3). A study of bank asset and liability management. Also explores the internal organization of commercial banks, current problems and recent innovations in commercial banking. Prerequisites: Fin. 643 and junior standing.

645. Security Analysis and Valuation. (3). Comprehensive study of methods of analyzing major types of securities. Market behavior analysis also is made. Explores the formulation of investment objectives, the design of portfolios for classes of institutional and individual investors and portfolio theory. Prerequisites: Fin. 641 and junior standing.

648. International Finance. (3). Cross-listed as Econ. 674. The study of foreign exchange, balance of payments, the international monetary system and the world’s money and capital markets and their relationships with the financial operations of multinational firms. Also explores relevant aspects of international financial management through a series of case studies. Prerequisites: Fin. 340, Econ. 202Q and junior standing.

690. Seminar in Selected Topics. (1-6). Repeatable with departmental consent. Prerequisite: junior standing.
750. Workshop in Finance. (1-4). Prerequisite: junior standing.

Courses for Graduate Students Only

820. Seminar in International Trade and Finance. (3). Cross-listed as Econ 870. A seminar in theoretical concepts and contemporary selected issues of international economics and finance. Includes foreign exchange markets, the Eurodollar market, Arab oil dollars in the international monetary system, transference of inflation between countries, developments in the common markets. Prerequisite: Fin. 648 or Econ. 674 or instructor's consent.

840. Financial Systems. (3). An intensive analytical introduction to finance from the management viewpoint, including the theory of financial management, the financial institutional structure and an analysis of a variety of practical problems of business finance. Prerequisite: Acct. 800 or equivalent.

841. Financial Administration. (3). An integrated treatment of basic business finance, financial management, financial statement analysis and financial institutions. Prerequisite: Fin. 840 or equivalent.

842. Structure and Policies of Financial Institutions. (3). The development, management and impact of policies of financial institutions, including planning, measuring and achieving financial goals. Prerequisite: Fin. 840 or equivalent.

843. Investment Analysis and Portfolio Management. (3). Study of the basic theory and practice of security valuation and investment management. Includes security and portfolio analysis, selection, of investment media and measurement of performance. Not available to students with credit in Fin. 641 or equivalent. Prerequisites: Fin. 340 or 840 and Econ. 330.


845. Security Analysis. (3). An analysis and valuation of investment securities issued by corporations and governmental agencies. Prerequisites: Fin. 641 or 843 or departmental consent.

846. Capital Budgeting. (3). A study of the organization and operation of the financial budgeting system. Explores problems in partial decentralization and in comparability of estimates of funds flow. Includes contemporary methods of treating uncertainties and constraints and the application of programming techniques. Also explains the determination of appropriate discount rates. Prerequisite: Fin. 840 or equivalent.

847. Speculative Markets. (3). Cross-listed as Econ 847. Analysis of the markets for speculative securities such as futures, options and commodities. Evaluates underlying theories explaining speculative markets in which such securities are traded and discusses trading strategies such as hedging and arbitrage. Prerequisite: Fin. 840 or equivalent.

890. Seminar in Special Topics. (1-3). Repeatable with departmental consent.

891. Directed Studies. (1-6). Prerequisite: departmental consent.

893. Special Project in Finance. (1-4). A special project including original case research supervised by faculty or field research. Prerequisite: approval of the MS committee. Open only to MS in administration degree candidates.


Legal Assistant

Department of Finance, Real Estate and Decision Sciences

Lower-Division Courses

230. Introduction to Paralegalism. (3). The new role concept of the legal assistant in the practice of law. An inquiry into what paralegals do, types of paralegal employment, education and licensure, professional ethics, authorized and unauthorized practice of law and an introduction to paralegal skills. Prerequisite: B. Law 130Q, concurrent enrollment of departmental consent.

231A. Legal Research and Writing I. (3). An introduction to the tools and techniques of legal research, with emphasis on the basic analytical skills. Introduces the student to the components of a law library through a variety of assigned problems, some of which culminate in the writing of a research memorandum or brief. Prerequisite: admission to the Legal Assistant Program or departmental consent.

231B. Legal Research and Writing II. (3). A continuation of Legal 231A. Covers research in specialized legal materials and writing of trials and appellate briefs. Prerequisite: admission to the Legal Assistant Program or departmental consent and Legal 231A.

232. Legal Aspects of Business Organizations. (3). The law of business organizations with emphasis on the practice aspects related to formation of operation of proprietorships, partnerships and corporations. Includes drafting aspects related to employment agreements, partnership agreements and corporate documents. Prerequisite: admission to the Legal Assistant Program or departmental consent.

233. Litigation I. (3). An introduction to the civil litigation process with emphasis on the practice aspects associated with a civil action. Topics include civil procedure, preparation and use of pleadings, discovery, law of evidence and appeals. Prerequisite: admission to the Legal Assistant Program or departmental consent.

234. Estate Administration. (3). The law of intestate succession, wills and trusts, with emphasis on the administration of an estate under Kansas law. Includes the preparation of wills, trust instruments and documents related to the probate process. Prerequisite: admission to the Legal Assistant Program or departmental consent.

235. Law Office Management and Technology. (3). The application of modern computer organization, management and systems technology to the law office. Emphasizes the use of systems approaches and the proper use of computer technology in the handling of all administrative functions and routine legal matters. Prerequisite: admission to the Legal Assistant Program or departmental consent.

236. Litigation II. (3). A continuation of Litigation I. Emphasizes the functions of a legal assistant in trial preparation and execution including gathering and organization of materials, investigating, drafting pleadings and interrogatories preparing a trial notebook, assisting during trial, etc. Prerequisite: admission to the Legal Assistant Program or departmental consent.

237. Family Law. (3). An introduction to family law including the role of a lawyer as counselor. Emphasizes the practice aspects related to divorce, separation, custody, support, adoption and guardianship matters. Prerequisite: admission to the Legal Assistant Program or departmental consent.

238. Legal Assistant Internship. (3). Internship training in a law office, corporate law department or government agency. Offered Cr/NC only. Prerequisite: 12 hours of legal special courses and internship committee approval.

239. Special Topics. (1-3). Repeatable with departmental consent. Prerequisite: admission to the Legal Assistant Program or departmental consent.

240. Substantive Law: Torts. (3). An introduction to the substantive law which is involved in personal injury litigation. Special emphasis is placed on analysis of cases and applying legal principles to facts. Prerequisite: admission to the Legal Assistant Program or departmental consent.

241. Legal Research and Writing II. (3). A continuation of Legal 231A. Covers research in specialized legal materials and writing of trials and appellate briefs. Prerequisite: admission to the Legal Assistant Program or departmental consent and Legal 231A.

243. Property Law. (3). An introduction to the principles of property law with emphasis on the practice aspects of real estate transactions. Prerequisite: admission to the Legal Assistant Program or departmental consent.

244. Legal Assistant Computer Skills. (3). An introduction to utilization of microcomputers by legal assistants. Emphasizes word processing, litigation support and computer-aided research with Lexis or Westlaw. Prerequisites: Legal Assistant 231A or 233 or departmental consent.

Management

Department of Management

Lower-Division Courses

101G. Introduction to Business. (3). Division course/elective. Everyone spends a lifetime dealing with and being influenced by business firms. The main goal of this course is to intro-
dude students to current issues, concepts and functions of business and its environment.

190. Selected Topics. (1-3). Repeatable with departmental consent.

Upper-Division Courses

360. Management and Organizational Behavior. (3). An overview of concepts, theories and practices that apply to the management of work organizations. Topics include organizational goals, corporate strategy, structure, decision making, leadership, motivation, communication, group dynamics, organizational change and the international dimension of business. Prerequisite: junior standing.

399. Special Group Studies In Management. (1-3). Repeatable with departmental consent.

430. Business, Government and Society. (3). An examination of the environments in which business operates: economic, political, social/cultural, technological, international, ecological and legal. Topics include business-government relations, social responsibility, business ethics, government regulation, legal framework and international business. Prerequisite: junior standing. Completion of Mkt. 300, Fin. 340, DS 350 and Mgmt. 360 is strongly recommended.

462. Leadership and Motivation. (3). A study of theories of human motivation and adaptation of these theories to programs in organizations. Probes concepts of authority, delegation and analyzes leadership styles. Prerequisites: Mgmt. 360 or concurrent enrollment and junior standing.

464. Organizational Communication. (3). An examination of the design of organizational communication systems. Includes an introduction to communication models and the analysis of the interpersonal communication process. Prerequisites: Mgmt. 360 or concurrent enrollment and junior standing.

491. Independent Study. (1-5). Offered Cr/NCr only. Closed to graduate credit. Prerequisites: junior standing and 2.750 GPA in management.

492. Internship in Management. (1-3). Offered Cr/NCr only. Prerequisites: junior standing, 2.750 GPA in management and departmental consent.

Courses for Graduate/Undergraduate Credit

561. Introduction to International Economics and Business. (3). Cross-listed as Econ. 672. A survey of the economic foundations of international trade and investment. After a study of international trade, theory and policy (the international economy), it explores the operations of the multinational firm within that environment. Prerequisite: Econ. 202Q and junior standing.

663. Organizational Interactions. (3). A dynamic experiential study of interpersonal, intraorganizational and interorganizational interactions. Prerequisites: Mgmt. 360 or concurrent enrollment and junior standing.

665. Organizational Development. (3). Planned organizational change. Emphasizes team building in organizations. Includes individual, group and structural developments. Prerequisites: Mgmt. 360 or concurrent enrollment and junior standing.

667. Organizational Structure and Design. (3). An introduction and exploration of the theories pertinent to the study of organizational subsystem structure and design. The interrelationships of organizational goals, decision making, environment, technology, climate, innovation and organizational structure/design are analyzed utilizing a systems approach. Also includes formal versus informal structure, differentiation, integration and matrix organizations. Prerequisites: junior standing and Mgmt. 360.

668. Decision Making. (3). Cross-listed as P. Adm. 730. A study of the theories of decision making with attention to the factors of creativity, the quest for subjective certainty, rationality, cognitive inhibitors, problem identification, evaluation of alternatives, applications of qualitative methods to decision processes and decision implementation. Prerequisites: Mgmt. 360 or concurrent enrollment and junior standing.

681. Administrative Policy. (3). An analysis of business problems from the perspective of top management. A capstone course which integrates the functional areas of business, including management, marketing, financial accounting and production. Discusses both domestic and international policy issues. Prerequisites: DS 350, Fin. 340, Mkt. 330, Mgmt. 360 or departmental consent and senior standing.

683. International Management. (3). A study of management concepts and practices applicable to business operations in an international setting. Examines a wide range of problems associated with business operations across national boundaries. Discusses cultural differences, language barriers, nationalism, protectionism, technology transfer and trade policies. Prerequisites: Mgmt. 360 or concurrent enrollment and junior standing.

690. Seminar in Selected Topics. (1-5). Repeatable with departmental consent. Prerequisite: junior standing.

750. Workshop in Management. (1-4). Prerequisite: junior standing.

Courses for Graduate Students Only

580. Socio-Legal Environment of Business. (3). An examination of the economic, political, social and legal environment in which business operates. Considers the philosophical foundation of capitalism and how business has interacted with government, consumers and labor over time. Emphasizes the role of business in dealing with various societal problems. Current issues, such as the social responsibility of business, affirmative action, occupational safety and health, environmental protection and the challenge to the legitimacy of the firm, are dealt with from the perspective of the decision-making manager.

835. International Business Administration. (3). An introduction to international business administration with particular attention to the development of multinational business strategies in light of the diverse economic, political, social and cultural dimensions of the environment that exist in both developed and developing areas of the world.

860. Management of Organizations. (3). An introduction to management and organizational theory. Includes classical and contemporary management theory, human relations, group dynamics, motivation, communication, organizational structure and design and behavioral control.

862. Organizational Behavior. (3). A study in individual behavior in an organizational setting. Human variables in business are analyzed from the standpoint of job placement, performance and individual development. Includes behavioral development, motivation and learning in human relations. Prerequisite: Mgmt. 860 or departmental consent.

865. Communication. (3). Cross-listed as Comm. 865. An analysis of communication models emphasizing their applications to communication problems in organizations. Explores social-psychological processes underlying persuasion in interpersonal relations and through the mass media. Critically analyzes communication systems and techniques within formal organizations. Prerequisite: Mgmt. 860 or departmental consent.

866. Organizational Conflict and Stress. (3). Studies in flexibility and rigidity. Reviews research in the area of innovation, conflict, resolution, stress and anxiety as relevant to organizational structures and behaviors. Prerequisite: Mgmt. 860 or departmental consent.

869. Research in Behavioral Science. (3). An analysis of some of the concepts and tools in behavioral science that are relevant to research in management. Explores managerial policies and practices underpinning persuasive communication, motivation, cognitive processes, attitudes and values, etc., may be analyzed in depth. Prerequisite: Mgmt. 862 or departmental consent.

885. Business Policies. (3). An analysis of business problems from the perspective of top management. Discusses policy-oriented cases, both domestic and international. Prerequisite: to be taken during last semester of student's program, or departmental consent.

886. Seminar in Research Methodology. (3). A study of concepts and procedures in the design and performance of research.

890. Seminar in Special Topics. (1-3). Repeatable with departmental consent.

891. Directed Studies. (1-5). Prerequisite: departmental consent.

893. Special Project in Management. (1-4). A special project including original case research, supervised internships or field research. Prerequisite: approval of the MS Committee. Open only to MS in administration degree candidates.

Marketing
Department of Marketing and Small Business

Lower-Division Course

190. Selected Topics. (1-3). Repeatable with departmental consent.

Upper-Division Courses

300. Marketing. (3). A description and analysis of the U.S. marketing system and an investigation of the factors affecting management of the major policy areas of marketing in the firm. Prerequisite: junior standing.


403. Marketing Research. (3). A study of the design of marketing information systems and marketing research procedures. Prerequisites: Mkt. 300, Econ. 231 and junior standing.

404. Retail Management. (3). An examination of the essential principles and practices of retail business management, including personal selling, merchandise management, sales promotion and store advertising. Prerequisites: Mkt. 300 and junior standing.

405. Consumer Behavior. (3). A study of a variety of concepts in the behavioral sciences related to specific topics in consumer behavior, including mass communications, reference groups, and sociological, psychological and economic aspects of consumer behavior. Prerequisites: Mkt. 300 and junior standing.

407. Marketing for Service and Nonprofit Organizations. (3). A study of the unique marketing challenges faced by services and nonprofit organizations. Evaluates marketing concepts and appropriate marketing programs from the perspective of these organizations. Prerequisites: Mkt. 300 and junior standing.

491. Independent Study. (1-5). Offered for Cr/NCr only. Closed to graduate credit. Prerequisites: junior standing and 2,750 GPA in marketing.

492. Internship in Marketing. (1-3). Offered for Cr/NCr only. Prerequisites: junior standing, 2,750 GPA in marketing and departmental consent.

Courses for Graduate/Undergraduate Credit

601. International Marketing. (3). Problems and procedures of marketing in foreign countries. Includes the effects of foreign cultures and marketing systems on the design of marketing programs. Prerequisites: Mkt. 300 and junior standing.

604. Distribution Management. (3). A study of all areas involved with the distribution of a firm’s products or services. Focusses on such issues as the development of a firm’s marketing channels and its relationships with wholesalers and retailers as well as the management of the firm’s storage facilities, inventory control, procedures and shipping facilities. Prerequisites: Mkt. 300 and junior standing.

606. New Product Marketing. (3). Addresses identifying, evaluating, developing and commercializing new products within both smaller and larger firms. Explores the role of the product/brand manager, a person who often acts as an internal entrepreneur. Prerequisites: Mkt. 300, 403 and 405.

607. Promotion Management. (3). An analysis of all issues involved with the promotion of an organization and its products or services. Deals with the development of advertising campaigns, management of the personal sales force, development of special promotional activities and management of public relations. Prerequisites: Mkt. 300 and junior standing.

608. Selling and Sales Force Management. (3). An analysis of current behavioral concepts of personal selling and the problems and policies involved in managing a sales force. Prerequisites: Mkt. 300 and junior standing.

609. Marketing Programs. (3). A study of all the aspects of the marketing mix that are integrated to make an effective and coordinated marketing program. Prerequisites: Mkt. 300 and six additional hours of marketing.

690. Seminar in Selected Topics. (1-5). Repeatable with departmental consent. Prerequisite: junior standing.

750. Workshop in Marketing. (1-4). Prerequisite: junior standing.

Courses for Graduate Students Only

800. Marketing Systems. (3). An intensive analytical introduction to the combination of institutions that comprise the overall marketing system. Also presents the marketing function as a major subsystem within the individual business firm.

802. Marketing Strategy. (3). Integration of long-range marketing and corporate policies. Includes budgetary control and the evaluation of the effectiveness of marketing systems. Also probes the organization of the marketing department and its relation to the total organization. Prerequisite: Mkt. 800 or departmental consent.

803. Marketing Analysis. (3). The application of the scientific method to the solution of marketing problems. Prerequisite: Mkt. 800 or equivalent.

805. Consumer Decision Processes. (3). An examination of different aspects of the behavior of consumers and of the factors that help explain their behavior. Includes an analysis of current concepts and models. Prerequisite: Mkt. 800 or departmental consent.

807. Services and Nonprofit Marketing. (3). Examines the characteristics of commercial and nonprofit services that pose unique marketing challenges for these types of organizations. Prerequisite: Mkt. 800 or equivalent.

890. Seminar in Special Topics. (1-3). Repeatable with departmental consent.

691. Directed Studies. (1-5). Prerequisite: departmental consent.

891. Labor Relations. (3). An analysis of the functions of personnel management, including selection procedures, evaluation of personnel, training, motivation, job evaluation, discipline, and personnel research. Prerequisite: Pers. 466 or consent of instructor.

491. Independent Study. (1-5). Offered Cr/NCr only. Closed to graduate credit. Prerequisites: junior standing and 2,750 GPA in personnel courses.

492. Internship in Personnel. (1-3). Offered Cr/NCr only. Prerequisites: junior standing and 2,750 GPA in personnel courses.

650. Personnel Management. (3). An analysis of the functions of personnel management, including selection procedures, evaluation of personnel, training, motivation, job evaluation, discipline and personnel research. Prerequisites: Pers. 466 or departmental consent.

651. Directed Studies. (1-5). Prerequisite: departmental consent.

666. Personnel Management. (3). An analysis of the functions of personnel management, including selection procedures, evaluation of personnel, training, motivation, job evaluation, discipline and personnel research. Prerequisites: Pers. 466 or departmental consent.

Courses for Graduate/Undergraduate Credit

666. Personnel Management. (3). An analysis of the functions of personnel management, including selection procedures, evaluation of personnel, training, motivation, job evaluation, discipline and personnel research. Prerequisites: Pers. 466 or departmental consent.

669. Seminar in Special Topics. (1-3). Repeatable with departmental consent.

745. Directed Studies. (1-5). Prerequisite: departmental consent.

Courses for Graduate/Undergraduate Credit

666. Personnel Management. (3). An analysis of the functions of personnel management, including selection procedures, evaluation of personnel, training, motivation, job evaluation, discipline and personnel research. Prerequisites: Pers. 466 or departmental consent.

670. Seminar in Special Topics. (1-3). Repeatable with departmental consent.

690. Seminar in Selected Topics. (1-5). Repeatable with departmental consent.

Courses for Graduate/Undergraduate Credit

666. Personnel Management. (3). An analysis of the functions of personnel management, including selection procedures, evaluation of personnel, training, motivation, job evaluation, discipline and personnel research. Prerequisites: Pers. 466 or departmental consent.
able with departmental consent. Prerequisite: Pers. 466 or departmental consent.

750. Workshop in Personnel. (1-4). Prerequisite: junior standing.

Courses for Graduate Students Only
667. Seminar in Personnel Administration. (3). An in-depth study and analysis of several critical and/or major current problems in personnel and a review of significant literature. The direction of the course could be determined by the interests of the class. Prerequisite: Pers. 466.

688. Wage and Salary Administration. (3). A study of job evaluation and other procedures that lead to the development of a sound wage and salary structure. Prerequisite: Pers. 466 or instructor's consent.

690. Seminar in Special Topics. (1-3). Repeatable with departmental consent.

691. Directed Studies. (1-5). Prerequisite: departmental consent.


750. Workshop in Real Estate. (1-4). Prerequisite: junior standing.

Courses for Graduate/Undergraduate Credit
611. Real Estate Finance. (3). Real estate financing instruments, institutions, traditional and creative financing techniques. Risk analysis, mortgage financing and underwriting, primary and secondary mortgage markets. Prerequisite: Fin. 340. RE majors should have completed RE 310.


618. Real Estate Investment Analysis. (3). Equity investor decision criteria, institutional and ownership entity investment constraints, financial leverage opportunities, cash flow analysis and creative income tax strategies. Prerequisite: Fin. 340. RE majors should have completed RE 310.

619. Urban Land Development. (3). A hands-on course to familiarize students with all aspects of land development, including supply and demand analysis, feasibility analysis, development financing, cash-flow budgeting and marketing strategies. Prerequisite: RE 310 or 611 or 618.

690. Seminar in Selected Topics. (1-5). Repeatable with departmental consent. Prerequisite: junior standing.

750. Workshop in Real Estate. (1-4). Prerequisite: junior standing.

Courses for Graduate Students Only
810. Real Estate Feasibility Analysis. (3). Theory and practice of analyzing the feasibility of both new construction and redevelopment of income-producing projects. Approaches detailed comprehensive case studies with contemporary analytical techniques. Prerequisite: RE 310, 614 and 618.

890. Seminar in Special Topics. (1-3). Repeatable with departmental consent.

891. Directed Studies. (1-5). Prerequisite: departmental consent.

893. Special Project in Real Estate. (1-4). A special project including original case research, supervised internships or field research. Prerequisite: approval of the MS Committee. Open only to MS in administration degree candidates.

College of Education

Maurine A. Fry, PhD, Dean

The primary purpose of the College of Education is to develop skilled and competent teachers, administrators, counselors, school psychologists, speech and language clinicians, and other specialists for our schools. College faculty also contribute to the improvement of education at local, state and national levels through their teaching, research and professional service.

Curricula listed in the following sections give students an opportunity for systematic study. These programs enable students to develop (1) an understanding of education's place in a democratic society, (2) a philosophy of education consistent with functioning in that society and (3) a conceptual base to use in relating theory to practice, which includes knowledge of human growth and development and principles of human learning.

The College of Education is accredited by all appropriate agencies, including the Kansas State Board of Education (see the inside front cover of this Catalog). The college recommends appropriate teacher's certificates be awarded to those who complete requirements established by the board.

Degrees Offered

Undergraduate

The college offers programs leading to the bachelor's degree and/or to state teacher certification at the elementary and secondary levels. The State Board of Education regulates standards for all teaching certificates, and curricula offered by the college are altered as needed to meet changes in these requirements.

Programs in industrial technology and physical education and recreation provide nonteaching routes to the bachelor's degree.

A student may obtain a second bachelor's degree in the College of Education. This requires 1) admission to the College of Education, 2) completion of a minimum of 30 credit hours in a program not required for the first bachelor's degree and 3) completion of all the requirements for graduation from the College of Education.

Graduate

The College of Education offers a number of graduate programs. The Master of Arts (MA) and Doctor of Philosophy (PhD) degrees are offered by the Department of Communicative Disorders and Sciences, and the Doctor of Education (EdD) degree is offered in educational administration. Programs in counseling, school psychology and educational administration lead to the Specialist in Education (EdS) degree. Master of Education (MEd) programs are available in counseling, educational administration, educational psychology, educational administration, special education, and special education. A Master of Science Education (MSE) also is available.

Graduate courses are offered to meet state requirements for certification or endorsement as psychologists, early childhood teachers, educational administrators, middle-level teachers, school counselors, school psychologists, special education teachers, speech andviews pathologists, and supervisory personnel.

Master's programs in elementary education, secondary education and educational psychology also have been designed for teacher practitioners who wish to enhance their teaching skills. For specific graduate programs see The Wichita State University Graduate Bulletin.

Policies

Admission

to the College of Education

Students who request a transfer to the College of Education must satisfy the following admission requirements:

1. complete 24 credit hours with an overall grade point average of at least 2.500.

2. the 24 hours must include English 101 and 102 with a grade of C or above, Communication 111 with a grade of C or above and College Algebra with a C or above or their equivalents.

Any student denied admission to the college may appeal by filing a written petition with the Standards Committee of the College of Education.

Admission to Programs in Teacher Education

Admission to the College of Education does not mean that a student is accepted into one of the certification programs in teacher education. Students must satisfy the following requirements to be admitted as a candidate for a Kansas teacher's certificate:

1. pass CI301 and 302 which involves (a) competency tests in reading, writing and mathematics (b) beginning field experiences
2. complete 50 semester hours of college/university credit
3. attain a minimum grade point average of 2.500 overall
4. earn a grade of C or better in English 101 and 102
5. earn a grade of C or better in Communication 111
6. earn a grade of C or better in College Algebra

Enrollment Limits

Students enrolled in the College of Education may not enroll in more than 21 semester hours of work per semester during the academic year. Summer Session enrollments are limited to a maximum of six hours for each four-week session or 12 hours during the Summer Session. Students who have completed at least 24 hours at WSU with a WSU grade point average of 3.000 or better may petition their department chairperson for permission to enroll in excess hours.

Probation and Dismissal

Students in the College of Education are placed on probation at the conclusion of any semester in which their overall WSU grade point average falls below 2.500. These students will be continued on probation if their grade point average for the semester on probation is at least 2.500. Students who fail to earn at least a 2.500 for any semester on probation may be dismissed for poor scholarship. Students on probation are limited to a maximum enrollment of 12 hours per semester.

Students may not be academically dismissed at the end of a semester unless they began that semester on academic probation. Also, students may not be academically dismissed from the College of Education before they have attempted a total of 12 semester hours at WSU after being placed on probation.

Students dismissed for poor scholarship may reenroll only with the special permission of the Standards Committee.

Students who have been dismissed for
academic reasons may seek readmission to the College of Education by appealing in writing for an exception to the regulations. The College of Education requires petitioners to meet with an academic counselor and to prepare a written petition which is considered by the Standards Committee of the College of Education and then forwarded to the University's Committee on Admissions and Exceptions for final action.

Academic counseling and advanced planning require careful attention and time. Thus, students should secure their recent academic records, complete their petition and have their readmissions counseling session at least five days before the first day of enrollment of the semester for which they wish to be readmitted.

Students develop their own cases for readmission. They should center their petitions around reasons for their failure and presentation of evidence for probable future success.

Cooperative Education

The College of Education is one of the participating colleges in the University Cooperative Education program. This program is designed to provide off-campus, paid, work experiences that integrate, complement and enhance the student's regular academic program. Students are placed in a variety of educational experiences which range from early childhood through university settings. Participation in the program requires enrollment for credit in specific Cooperative Education courses designated by the appropriate academic department in the college. To enroll in the program or for more information, students should contact the Cooperative Education coordinator.

Requirements for Graduation

Several sets of graduation requirements apply to undergraduates in the College of Education seeking a Bachelor of Arts (BA) in education or the institution's recommendation for a teaching certificate.

Students should study carefully the requirements for their particular area of study.

Under Kansas Department of Education policies students are expected to complete all program requirements in effect at the time they are admitted into teacher education rather than the program (checksheet) in effect when they began their college or university work.

For graduation from the College of Education, students must satisfactorily complete all program requirements, complete a minimum of 124 semester hours of credit, have at least a 2.500 grade point average in the major field, and must have at least a 2.500 overall grade point average.

Requirements for admission to student teaching for communicative disorders and sciences students are listed in the department's program description later in this section. Certain programs may require a higher grade point average for admission to student teaching.

Requirements for Certification

All graduates applying for teacher certification in Kansas are required to complete the National Teachers Examination established by the Kansas State Department of Education in order to qualify for their initial certificate. A grade of C or better in student teaching is necessary to receive a recommendation for a teaching certificate.

Prospective teachers in specialized fields of art and music are subject to certain departmental requirements and the general and professional education requirements listed under secondary education. (Students planning to teach fine arts should consult the College of Fine Arts section of the Catalog.)

General Education

A total of 42 hours of general education courses is required for all students in the college, including the following requirements for graduation:

I. Basic Skills (12 hours)
   A. Written communication (six hours)*
   B. Oral communication (three hours)*
   C. Mathematics (three hours)—College Algebra*

II. Distribution Requirements ("G" or "Q" courses only)
   A. At least nine hours of humanities and fine arts in three different departments—literature (three hours required), American studies, art education, art history, foreign languages, history, linguistics, musicology-composition, music education, philosophy, religion
   B. At least six hours in two departments of social and behavioral sciences—Psychology 111 (required), anthropology, economics, geography, political science, sociology

C. At least six hours in two departments of natural sciences and mathematics—biology, chemistry, geology, mathematics, physics

D. At least nine hours of electives from general education course work

Note: (a) No courses from the student's major department may be counted in the general education area; and (b) courses must be taken in at least two departments in each division outside the division containing the student's major. All course work in divisions A-D must be "G" or "Q" courses.

*Must have a grade of C or better in Engl. 101 and 102, in Comm. 111 and in College Algebra.

Professional Education

Professional education requirements in areas of specialization and additional general education requirements in these areas are summarized on the following pages.

Communicative Disorders and Sciences

I. General Education

Students majoring in communicative disorders and sciences are expected to meet all general education requirements. In Division B, courses must be taken in two different departments. At least six hours of psychology are required.

The following courses are required:

- Preprofessional Block Spring only
  - CI 301, Introduction to Professional Education, 2 hours
  - CI 302, Field Experiences/Preprofessional Block, 1 hour
- Block I Fall only
  - CESP 334, Growth and Development, 2 hours
  - CI 430, Social/Multicultural Education, 3 hours
  - CI 601, Introduction to Exceptional Child, 2 hours
  - CI 311, Field Experiences/Block I, 1 hour

The following courses are required for speech-language pathology majors:

- CDS 327, Clinical Methods in the Public Schools, 3 hours
- CDS 447, Speech and Language Practicum in the Public Schools, 5 hours
- CDS 448, Public School Speech and Language Programs, 2 hours

The following courses are for Audiology majors:
CDS 457, Audiology Practicum in the Public Schools, 5 hours
CDS 458, Public School Audiology Programs, 2 hours

Elementary Education

I. General Education
Students majoring in elementary education should meet all requirements in the General Education program. In addition, three social science courses and Psychology 111 are required in Division B. In Division C, both a biological science and a physical science are required (one must include a lab), along with Math. 501.

II. Professional Education
Preprofessional Block Spring only
CI 301, Introduction to Professional Education, 2 hours
CI 302, Field Experience/Preprofessional Block, 1 hour
Block I Fall only
CESP 334, Growth and Development, 2 hours
CI 430, Social/Multicultural Education, 3 hours
CI 601, Introduction to Exceptional Child, 2 hours
CI 311, Field Experience/Block I, 1 hour
Block II Spring only
CESP 433, Learning and Evaluation, 3 hours
CI 328, Curriculum, Instruction and Management, 5 hours
CI 312, Field Experience/Block II, 1 hour
Block III Fall only

III. Elementary Specialization
Fall only
CI 316, Children's Literature (3)
CI 402, Mathematics and Science Methods (5)
CI 406, Methods: Elementary Social Studies (3)
CI 413, Pre-Student Teaching (1) Spring only
CI 322, Language Arts and Reading Methods (5)
CI 413, Pre-Student Teaching (1)
IV. Allied Fields (7-9)
PE 425, Methods for Elementary PE and Health (2)
Art E. 311, Art Education in the Elementary School (2)
Mus. E. 351, Methods for Music Education (2-3) (Mus. E. 606 may be taken)
V. Electives (18)

VI. Student Teaching Semester Spring only
CI 457, Senior Seminar, 1 hour
CI 427, Philosophy and History of Education, 2 hours

Secondary Education

I. General Education
Students majoring in secondary education should meet the requirements in the General Education program as listed above.

II. Secondary Teaching Major
Students must fulfill the teaching specialty emphasis of a program as specified in the teaching field section that follows. Only those specialties listed among the combined curricula and departmental majors and minors in the majors and minors section may be counted.

1. Major field—a field normally taught in secondary schools should be studied.
2. Minor field—at least one minor field must be taken. Completion of a minor does not qualify the student to teach that field. Special arrangements have to be made for the student to qualify to teach in minor fields. In no case may the minor consist of fewer than 15 semester hours. No minor is required if an area major of 50 hours is elected.

III. Professional Education
The following courses are required:
Preprofessional Block Spring only
CI 302, Introduction to Professional Education, 2 hours
CI 301, Field Experience/Preprofessional Block, 1 hour
Block I Fall only
CESP 334, Growth and Development, 2 hours
CI 430, Social/Multicultural Education, 3 hours
CI 601, Introduction to Exceptional Child, 2 hours
Block II Spring only
CESP 433, Learning and Evaluation, 3 hours
CI 328, Curriculum, Instruction and Management, 5 hours
CI 312, Field Experience/Block I, 1 hour
Block III Fall only
Select according to major:
CI 454E, Instructional Strategies English, 3 hours
CI 454J, Instructional Strategies Social Studies, 3 hours

For majors in math, science, social studies, English, industrial technology
Block I Fall only
CESP 334, Growth and Development, 2 hours
CI 430, Social/Multicultural Education, 3 hours
CI 601, Introduction to Exceptional Child, 2 hours
CI 311, Field Experience/Block I, 1 hour
Block II Spring only
CESP 433, Learning and Evaluation, 3 hours
CI 328, Curriculum, Instruction and Management, 5 hours
CI 312, Field Experience/Block II, 1 hour

For majors in physical education, art, music
Block I Fall only
CESP 334, Growth and Development, 2 hours
CI 430, Social/Multicultural Education, 3 hours
CI 601, Introduction to Exceptional Child, or Art E. 518, Art for the Exceptional Child or Mus. E. 611, Music for Special Education, 2 hours
CI 311, Field Experience/Block I, 1 hour
Block II Spring only
CESP 433, Learning and Evaluation, 3 hours
CI 328, Curriculum, Instruction and Management, 5 hours
CI 312, Field Experience/Block II, 1 hour

Block IV
CI 457, Senior Seminar, 1 hour  
CI 427, Philosophy and History of Education, 2 hours  
Student Teaching in the Elementary School, 4 hours  
Student Teaching in the Secondary School, 4 hours  
Student Teaching Seminar, 1 hour  

For majors in music education  
For other requirements, see Music Education, College of Fine Arts  

For majors in art education  
For other requirements, see Art Education, College of Fine Arts  

For majors in foreign languages  
For other requirements, see Modern and Classical Languages and Literatures, Fairmount College of Liberal Arts and Sciences  

Secondary Teaching Fields  
The major is generally no fewer than 30 semester hours. (For specific exceptions see languages and the combined curricula programs.) Students may elect certain of the majors offered in Fairmount College of Liberal Arts and Sciences, the College of Fine Arts or the College of Education. Students meet the specific course requirements of the department in which the major is offered. For example, students may elect to major in history because they wish to become high school history teachers. To do so, they complete the history major as prescribed by the history department in Fairmount College of Liberal Arts and Sciences. In addition, they complete the University’s general education requirements, the professional education sequence and other requirements for the teacher’s certificate prior to graduation. Students should work closely with a faculty adviser in the College of Education to be sure they meet certification requirements. A check sheet of requirements for each teaching field is available from the College of Education.  
The selection of teaching fields for the junior or senior high school is made with an academic adviser representing the College of Education. The teaching field or major should be declared no later than the beginning of the junior year. Students who plan to teach in secondary schools may select their major and minor from the fields given below. The specific course requirements of the department from which the major or minor work is taken prevail. The minor will not qualify a student to teach unless special arrangements have been made in advance.  

Majors and Minors  
Art*  
English language and literature*  
Foreign language  
French  
German  
Latin  
Spanish  
Mathematics  
Music*  
Physical education  
Science*  
Biological Chemistry  
Natural sciences-biological  
Natural sciences-physical  
Physics  
Social studies comprehensive*  
Social studies*  
Economics  
Geography  
History  
Political science  
Sociology/Anthropology  

Minors Only  
American studies  
Anthropology  
Computer studies  
Geology  
Industrial Technology  
Journalism  
Philosophy  
Religion and philosophy†  
Speech communication  

*Needs no minor  
†Religion is combined with philosophy on a minor—to more than eight hours of religion will count toward a degree.  

Combined Curricula  
The teaching assignment after graduation often involves a combination of related subjects. For this reason intensive study in the following combined disciplines is offered in lieu of a departmental major and minor. Students should work closely with advisers to ensure proper course selection for certification.  

Natural Science—Biological  
This major requires a minimum of 50 hours. A teacher who qualifies under this provision may teach chemistry and general science as well as biology. Students also may make arrangements to qualify to teach other sciences. Requirements for a major listed below include Division C requirements of the General Education Program.  
Major. Requirements for a natural sciences—biological major are: Biol. 203Q  
204, 330, 418, 524, 509G or 584; any class in botany; any one of Biol. 560, 575, 578; Chem. 111Q-112Q, 523, 531; Phys. 111Q or 213Q; Geol. 302Q; Math 112; CI 720, 721.  

Social Studies  
Completion of the following program will lead to certification in comprehensive social studies at the secondary level. The following fields are included in this certification: American history, world history, government, anthropology, economics, geography and sociology. Courses to be selected in the General Education section:  
Division A  
Hist. 101G ..................................................... 3  
Division B  
Pol. S. 121Q .................................................. 3  
Division C  
Antlr. 102Q or 124Q ........................................ 3  
Econ. 201Q or 101G ........................................ 3  
Geog. 125Q or 262Q ........................................ 3  

Major  
1. History (29 hours)  
102G, Western Civilization II  
131Q, History of the U.S. to 1865  
132Q, History of the U.S. since 1865  
535Q, History of Kansas  
Choose one:  
523, The American Woman in History  
519, Social History of the U.S. to 1865  
530, The American Woman in History  
550, The American Woman in History  
533, The American Woman in History  
534, The American Woman in History  
534Q, The American Woman in History  

Choose one:  
517, Constitutional History of the U.S. I  
518, Constitutional History of the U.S. I  
521, Constitutional History of the U.S. II  
522, Constitutional History of the U.S. II  

Choose one:  
330Q, The Americans: Conflict and Consensus in the Development of
American Society and Culture
515, Economic History of the U.S.
525, American Military History
Choose one:
553, History of Mexico
558, The Ancient Near East
Choose one:
590, History of Russia
591, History of the Soviet Union

2. Political science (15 hours)
State Government
338Q, American Political Thought
335Q, International Politics and Institutions I
Choose one:
356, International Politics and Institutions II
226Q, Comparative Politics
320, Politics of Developing Areas
Choose one:
444, Modern Political Theory
547, Contemporary Political Theory

3. Anthropology (3 hours)
Choose one:
303, World Cultures
503, Approach to Cultural Anthropology

4. Economics (3 hours)
Choose one:
201Q, Principles of Economics I
202Q, Principles of Economics II

5. Geography (3 hours)
510, World Geography

6. Sociology (6 hours)
111Q, Introduction to Sociology
Choose one:
220Q, Contemporary Social Problems
350, Social Interaction
526, Political Sociology

Undergraduate Major

The preprofessional, undergraduate major places primary emphasis on the general area of communicative sciences and disorders and beginning specialized emphasis on speech and language pathology or audiology. Supervised practicum courses are required as part of the training program. CDS 417 and 418 are required for undergraduate students majoring in speech and language pathology, and CDS 447 and 448 are required for students wishing to qualify as speech-language pathologists the public schools. CDS 451 and 452 are required for undergraduate students majoring in audiology, and CDS 457 and 458 are required for students wishing to qualify as audiologists in the public schools.

Students should make formal application for practicum courses one semester prior to enrollment in CDS 417. Evaluation of the student's speech, language, and hearing proficiency will be conducted prior to enrollment in CDS 417. Significant deviations in any area must be corrected to maximum ability before enrollment in practicum courses or student teaching. In addition, medical clearance is required for all observation and practicum classes. Admission to a major in CDS does not constitute assurance of automatic entrance into the practicum or student teaching sequence.

Undergraduate students may major in communicative disorders and sciences in either the College of Education or Fairmount College of Liberal Arts and Sciences. Most students take the program in the College of Education, but those wishing to emphasize applied language study may enroll in the communicative disorders and sciences major in Fairmount College of Liberal Arts and Sciences. In either case, all students must satisfy the general education requirements of the University. Students in the College of Education must select certain courses from the General Education program that will satisfy teacher certification requirements. These are stated under general requirements at the beginning of the College of Education section of the Catalog.

Speech-Language Pathology

The major with emphasis in speech and language pathology consists of a minimum of 37 hours and includes the following courses:

Required: CDS 111Q, 132, 214, 218, 220, 250, 315, 316, 322, 340, 350, 417, 418, 450 and 520. To qualify as speech-language pathologists in the public schools, students must also complete CDS 527, 447 and 448.

Optional: CDS 610, 720, 726, 730 and 764.

Audiology

The major with emphasis in audiology consists of a minimum of 37 hours and includes the following optional courses.


Optional: CDS 610, and 764.

Applied Language Study in Fairmount College of Liberal Arts and Sciences

The major with emphasis in applied language study consists of a minimum of 36 hours and includes 30 hours of required course work and 6 hours selected from the following optional courses.

Required: CDS 111Q, 214, 218, 220, 627; CI 456 or Min. S., 210Q; Eng!. 315, 667, 665 or 672 and Ling. 651.

Optional: CDS 132, 250, 315, 316, 490, 610; Eng!. 274.

Teacher Education Certification

One full semester of practicum in the public schools is required for all students working toward certification as public school speech-language pathologists or audiologists. To complete this requirement students must take CDS 417 and 418 or 451 and 452, in a clinical setting, then CDS 447 and 448, or CDS 457 and 458 in a public school setting.

The assignment for student teaching begins with the opening of the public schools, and the student teacher is expected to follow the public school calendar, on a half-day basis, for a semester.

Students must apply for admission to both student teaching semesters (CDS 447, 417 and 418, or 451, 452, and 457). They must have an overall grade point average of 2.500; a 2.500 average in the major field; a grade of C or better in English 101 and 102 and in Communication 111, or their equivalents; and the recommendation of the major department.
Clinical Certification
The communicative disorders and sciences undergraduate preprofessional major may be applied toward certification by the American Speech-Language-Hearing Association. This certification requires a master's degree, with major emphasis in speech-language pathology or in audiology.

Undergraduate Minor
A minor in communicative disorders and sciences consists of 18 hours and may be earned in either the College of Education or Fairmount College of Liberal Arts and Sciences. The following courses are recommended for a minor unless other arrangements are made: CDS 111Q, 132, 214, 218, 220 and 316. Arrangements for the minor should be made in consultation with the Department of Communicative Disorders and Sciences.

Other Requirements
Participation in many of the department's clinical practicum courses requires that a student obtain medical clearance prior to the start of the course. This requirement is indicated in the individual course descriptions. Procedures to be followed may be obtained from the department's office. Also, seniors and graduate students who participate in active clinical practice during the year must purchase professional liability insurance in the amount of not less than $1,000,000/$3,000,000. This must be done on a yearly basis, when appropriate.

CDS 706, Communicative Development and Disorders is a general survey course and may not be used as part of either a major or minor in communicative disorders and sciences at the undergraduate or graduate level without departmental consent.

Clinical Services
Clinical services for members of the community with speech, language or hearing disorders, as well as students enrolled at Wichita State, may be arranged with the Speech-Language Hearing Clinic. Fees are charged for these services.

General

Lower-Division Course
260. Signing Exact English I (1). 2R. Introduction to the theory and use of Signing Exact English (SEE) as a means of communication with the hearing impaired. Independent outside practice is necessary to facilitate skill.

281. Cooperative Education. (1-8). Allows students to participate in the cooperative education program. Offered Cr/NC only.

Upper-Division Course
360. Signing Exact English II (1). 2R. An advanced class in the theory and use of Signing Exact English (SEE) as a means of communication with the hearing impaired. Emphasizes vocabulary and interpreting skills. Prerequisite: CDS 260.

481. Cooperative Education. (1-8). See CDS 281.

490. Directed Study in Speech and Language Pathology or Audiology. (1-3). Individual study or research on specific problems. Repeatable. Instructor's consent must be obtained prior to enrollment.

Courses for Graduate/Undergraduate Credit
570. Foreign Accent and Dialect Reduction. (3-3; 1L). Primarily for the nonnative speaker of English or for the speaker of a nonstandard dialect of English wanting to improve pronunciation and in reading and critically evaluating the clinical research literature. Prerequisite: CDS 260.

691. Cooperative Education (1-8). A work-related placement that integrates theory with a planned and supervised professional experience designed to complement and enhance the student's academic program. Prerequisite: 2.5 GPA. Repeatable for credit. Offered Cr/NC.

715. Selected Topics in Communicative Disorders and Sciences. (1-3). Individual or group study in specialized areas of communicative sciences and disorders. Repeatable.

730. Workshop in Communicative Disorders and Sciences. (1-4). Offered periodically on selected topics in speech and hearing habilitation.

Courses for Graduate Students Only
800. Research Methods. (3). A survey of the different research methods utilized in the fields of communication sciences and communicative pathologies. Students acquire the fundamental motivation, knowledge and skills for conducting clinical and basic science research and in reading and critically evaluating the clinical research literature. Prerequisite: graduate student status.

880. Presentation of Research. (1-3). A directed research project culminating in a manuscript appropriate for publication. Repeatable, but total credit hours may not exceed three. Prerequisites: CDS 800 and instructor's consent prior to enrollment.

890. Independent Study in Speech and Language Pathology or Audiology. (1-3). Arranged individual, directed study in specialized content areas in speech and language pathology or audiology. Repeatable. Prerequisite: instructor's consent prior to enrollment.

935. Advanced Practicum in Communicative Disorders and Sciences. (1-4). Advanced individual or group study in specialized areas of communicative sciences and disorders. Intended for doctoral students or advanced master's-level students. Repeatable.

936. Seminar in Clinical Research. (3). Presentation of advanced models in research design applicable to the investigation of communicative disorders in a clinical setting. Prerequisites: CDS 800 and competency in statistics.

932. Research Proseminar. (1). A weekly seminar of informal discussion and formal presentation regarding how real world research is performed. Prerequisite: doctoral student standing.

935. Advanced Practicum in Communicative Disorders and Sciences. (1-4). Supervised internship in one or more of the following sections: Advanced Practicum in Client Management, Advanced Practicum in Academic Institution, Advanced Practicum in Research, and Advanced Practicum in Clinical and Program Admistration. Intended for doctoral students or advanced master's-level students. Repeatable; more than one section may be taken concurrently.

990. Advanced Independent Study in Speech and Language Pathology, Audiology or Speech Science. (1-3). Arranged individual, directed study in specialized content areas in speech and language pathology, audiology or speech sciences. Repeatable. Prerequisites: advanced standing and instructor's consent.


Communication Sciences

Lower-Division Courses
214. Anatomy and Physiology of the Speech and Hearing Mechanisms. (3). A study of the prenatal development and basic anatomy of the systems necessary for speech and hearing. Discusses the respiratory, pharyngeal, articulatory and auditory mechanisms from a func-
tional point of view. Prerequisite: prior or concurrent enrollment in CDS 119Q.

218. Phonetics: Theory and Application. (3). Cross-listed as Ling. 218. The study of physiologic, acoustic and perceptual specification of speech sounds and a survey of current phonological theory and applications to speech improvement. Gives extensive practice in transcription of speech. Prerequisites: sophomore standing and prior or concurrent enrollment in CDS 119Q.

220. Developmental Psycholinguistics. (3). Cross-listed as Ling. 220. The study of the acquisition of language in the child from birth to six years of age. Evaluates various acquisition theories in the light of current psychological and linguistic thought. Special emphasis on the development of phonology, morphology and syntax. Prerequisites: sophomore standing and prior or concurrent enrollment in CDS 119Q.

Upper-Division Course

316. Introduction to Speech and Hearing Sciences. (3). Examination of elements in the chain of events that lead to human communication. Studies speech production and perception at physiological and acoustical levels with primary emphasis on acoustics. Prerequisites: junior standing and prior or concurrent enrollment in CDS 119Q.

Courses for Graduate/Undergraduate Credit

610. Neurology of Speech & Language I: Basic Processes. (3). A consideration of basic neuroanatomy and neurophysiology necessary for obtaining an understanding of the representation of speech and language in the human central nervous system and of conditions resulting from neurological impairment. Prerequisite: at least senior standing.

Courses for Graduate Students Only

828. Advanced Speech and Hearing Science. (3). 3R; 1L. Advanced study of speech and hearing processes, primarily in their normal aspects. Attention to current understanding of speech generation, the speech signal and the normal function of hearing. Attention also to techniques of investigation of these processes. Prerequisite: CDS 316 or equivalent or departmental consent.

830. Laboratory Instrumentation. (3). 2R; 3L. An introduction to clinical and research instrumentation used in the fields of communicative disorders and sciences. Experience with instrumentation is gained through practical projects and applications within the laboratory. Prerequisite: CDS 828.

900. Speech Acoustics. (3). A detailed analysis of the acoustics of speech. Studies the various theories of speech sound production along with the instrumental analysis of speech sounds and ends with an examination of various speech disorders from the point of view of acoustics. Prerequisite: CDS 828.

903. Speech Perception. (3). A critical review of the theories and empirical research addressing the perception of speech, species-specific communication and speech recognition systems through artificial intelligence. Discusses both unimodal and bimodal models of perception. Prerequisite: CDS 900.

910. Speech Physiology. (3). A critical review of pertinent research concerning the physiological bases of speech. Emphasizes understanding of the instrumental techniques utilized in such studies. Prerequisite: CDS 828.

Admission to courses is possible with a minimum grade of C in each stated prerequisite or its judged equivalent, or with departmental consent, unless otherwise specified in the course description.

Speech and Language Pathology

Lower-Division Courses

111Q. Disorders of Human Communication. (3). Division B course/elective. An orientation to disorders of human communication, communicative and psychosocial problems commonly encountered and general approaches to habilitation.

132. Introduction to Clinical Management in Speech and Language Pathology and Audiology. (3). An overview of management procedures for communicative disorders in relation to other educational disciplines. Presents techniques for evaluation of speech-language pathology and audiology diagnostics. Requires twenty hours of observation of clinical procedures in a speech-language-hearing clinic. Prerequisites: prior or concurrent enrollment in CDS 111Q and medical clearance.

Upper-Division Courses

315. Articulation Disorders: Diagnosis and Clinical Management. (3). Contrast of normal and deviant articulation. Also includes etiology, evaluation and methods of modification. Prerequisites: CDS 213 and 218.

322. Introduction to Speech and Language Assessment. (2). Considers test instruments pertaining to the assessment of speech and language disorders. Discusses test validity, reliability and interpretation. The student administers selected tests under supervision. Requires observation of diagnostic evaluations in the WSU Speech-Language-Hearing Clinic. Prerequisite: CDS 315 junior standing and medical clearance.

327. Clinical Methods in the Public Schools. (3). Organization, administration and professional relationships in public school speech and language management programs on the elementary and secondary school levels. Emphasizes procedures and materials for surveying, scheduling, writing IEPs; therapeutic management, record keeping and utilization of various instructional media. Should be taken the semester prior to student teaching—CDS 447 and 448. Prerequisites: CDS 132, 315 and prior or concurrent enrollment in CDS 322.

340. Introduction to Language Disorders. (3). Introduction to language disorders of form content and use. Includes basic assessment and remediation procedures. Prerequisite: CDS 220.

350. Auditory Disorders. (2). Introduction to the etiology, nature and symptomology of auditory disorders and pathologies. Discusses basic principles of audiogram interpretation and hearing loss and pathology including amplification. Prerequisite: CDS 250.

400H. Honors Seminar. (2). Advanced study in selected areas of speech, language and hearing disorders, with students selecting the content of the seminar. Provides an opportunity for original student contributions within a group seminar experience under the guidance of a senior professor. Prerequisite: CDS major, junior or senior standing who is eligible for the Emory Lindquist Honors Program.

447. Speech and Language Practicum in the Public Schools. (5). Half-time participation in a public school speech and hearing management program under the guidance of a certified clinician and a college supervisor. Prerequisites: senior standing, CDS 327, 417 and 418, departmental consent one semester prior to enrollment and medical clearance.

448. Public School Speech and Language Programs. (2). Discussion and evaluation of student teaching experiences in public schools, demonstrations of applied clinical skills, counseling on the elementary and secondary school levels. To be taken concurrently with CDS 447.

490. Directed Study in Speech and Language Pathology or Audiology. (1-3). Individual study or research on specific problems. Repeatable for credit. Instructor's consent must be obtained prior to enrollment.

Courses for Graduate/Undergraduate Credit

517. Clinical Methods in Articulation and Language. (1). Techniques and methods for the development of clinical skills in a supervised practicum setting. Children with articulation and language disorders provide the primary focus. Lectures include clinic procedures for writing behavioral objectives and progress reports and conducting parent conferences. Prerequisites: junior or senior standing, CDS 132, 315 and 340; prior or concurrent enrollment in CDS 322.

518. Supervised Practicum in Articulation and Language. (1). Supervised practicum of clinical assignments in the University Speech-Language-Hearing Clinic. Prerequisite: prior or concurrent enrollment in CDS 417; departmental consent one semester prior to enrollment and medical clearance.

520. Language Disabilities in Children and Adolescents. (3). Psycholinguistic and cognitive approaches to language disabilities in children and adolescents. Covers practical application of language assessment procedures, interpretation of results and methods of language intervention. Prerequisites: CDS 111Q, 705 or 706, 340 or departmental consent.

627. Teaching English as a Second Language-
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(3). Cross-listed as Engl. 627 and Ling. 627.

409. Language Assessment. (3). Focuses on the measurement of language ability and speech impairment in individuals and families. Requires 3-5 hours of supervised laboratory work per week. Prerequisite: CDS 250, medical clearance, departmental consent, and concurrent enrollment in CDS 415.

410. Neurology of Speech and Language I: Motor Speech Disorders. (3). Studies speech disorders resulting from upper motor neuron lesions in the central nervous system. Discusses evaluation and management approaches for selected disorders. Prerequisite: prior or concurrent enrollment in CDS 610.

415. Interviewing and Parent Counseling. (3). Presentation of current techniques of case history taking and interviewing as they apply to speech, language, hearing, learning and behavior disorders in handicapped children and adults. Considers procedures in ongoing and terminal counseling.

420. Examination Methods in Speech and Language Pathology. (3), 3R, 3L. Appraisal and differential diagnostic techniques in speech and language pathology. A weekly diagnostic practicum in communicative disorders; provides experiences in report writing and follow-up procedures. Prerequisites: medical clearance and terminal semester of graduate program.

421. Exam Methods Lab. (1). The student conducts speech and language evaluations under direct faculty supervision. Prerequisite: Concurrent enrollment in CDS 820.

424. Language Remediation Strategies—Birth to 5. (3). Discussion of current language intervention strategies and programs for infants, toddlers, and preschoolers, birth to 5 years. Also examines assessment procedures leading to the development of individualized and family programs.

425. Seminar in Communicative Disorders. (2-3). Review of recent developments and a study of methods of integrating research findings and newer clinical methods and concepts into a rehabilitative procedure.

435. Advanced Graduate Methods in Communicative Disorders. (1). Repeatable. Lecture and class discussions covering various types of communicative disorders. Relates theories and methods to students' clinic and practicum assignments. Prerequisites: CDS 417, 418 or equivalent and departmental consent.

436. Graduate Practicum in Communicative Disorders. (1-2). Repeatable. Supervised application of diagnostic and/or clinical management techniques with children and adults presenting communicative disorders. Requires 30 hours practicum for each hour of credit. Prerequisites: departmental consent and medical clearance.

440. Introduction to Audiology. (3), 3R, 3L. History and scope of the field. Studies basic aspects of normal hearing function and surveys audiologic testing procedures, including audiometric screening. Also includes an introduction to the use of hearing aids, auditory training lip reading and rehabilitative counseling. Prerequisite: CDS 111Q.

Upper-Division Courses


452. Beginning Practicum in Audiometrics. (3). Supervised practicum of audiometric techniques in the University Audiology Clinic. Requires 2-4 hours of supervised audimetric practicum per week. Prerequisite: CDS 250, medical clearance, departmental consent, concurrent enrollment in CDS 451.

457. Audiology Practicum in the Public Schools. (3). Half-time participation in a public school audiology program under the guidance of a certified clinician and a college supervisor. Prerequisites: CDS 250, 327 and 441, senior standing, medical clearance and departmental consent one semester prior to enrollment.

458. Public School Audiology Programs. (2). Discussion and evaluation of student audiology experiences in public schools; demonstration of applied audiology skills; counseling on the elementary and secondary school levels. To be taken concurrently with CDS 457.

Courses for Graduate/Undergraduate Credit

470. Senior Seminar in Audiology. (2). An exploration of theories, principles, practices, and pitfalls of audiology with a special emphasis on creating dynamic models for research interpretation, clinical interactions, and professional management: Examination of the current educational, professional, and ethical issues in clinical audiology and hearing science. Prerequisite: CDS 450 or senior standing.

571. Clinical Audiology I. (3), 3R, 3L. Techniques and procedures for administering the basic auditory test battery and the interpretation of audiomteric results. Prerequisites: graduate student status.

752. Clinical Audiology II. (3) 3R, 3L. Diagnostic and rehabilitative procedures in the audiology clinic. Techniques and procedures for the administration and interpretation of special audiology tests including: tests for pseudohypoacusis, predictive acoustic reflexes, tests for central auditory pathology and calibration. Prerequisite: CDS 751.

764. Adult Aural Rehabilitation. (2). Psychological, social and occupational impact of adventitious hearing loss in adults. Theory,
assessments and rehabilitation of hearing-impaired adults. Speechreading, auditory training, special amplification needs, counseling techniques and methods of improving functional communication across all environments. Management of tinnitus and vertigo. Prerequisites: CDS 231, 450.

Courses for Graduate Students Only

582. Anatomy and Physiology of the Auditory System. (2, 3). Examines in detail anatomy and function of the auditory system in light of current research knowledge. Studies normal system as a basis for understanding the pathological system. Prerequisites: CDS 250, 316.

587. Introduction to Psychoacoustics. (2, 3). Reviews perception of sound stimuli, psychoacoustic information, and perception of sound. Basic principles underlying the perceptual aspects of hearing process, emphasizing the interdependencies between stimulus factors and subjective auditory experience as related to communication behavior. Prerequisite: CDS 250.

585. Medical Audiology. (2). Many hearing disorders require evaluation/treatment by both the audiology and medical professions. Course reviews the audiological and physiological aspects of the major disorders found in children and adults. Prerequisites: CDS 250, 826 or instructor's consent.

584. Community and Industrial Audiology. (2). Reviews recent developments and research in the field of audiology, federal, and state regulations and environmental noise problems. Prerequisite: CDS 751.


583. Physiological Measures of the Auditory and Vestibular Systems. (3, 3). Reviews techniques and procedures for administration and interpretation of psychophysical tests of the auditory and vestibular systems, including electrocochleography (ECoG), auditory brainstem response (ABR), electrooculography (EOG), and acoustic reflex. Includes test administration. Prerequisites: CDS 610, 826, 851.

586. Amplification I. (3). The history and function of hearing aids, auditory trainers and assistive listening devices. The measurement and significance of the electroacoustical characteristics. The principles and procedures for the selection and recommendation of specific amplification systems for individual hearing losses. Prerequisite: CDS 751.

681. Cooperative Education (1-8). A work-related placement that integrates theory with a planned and supervised professional experience designed to complement and enhance the student's academic program. Prerequisite: Graduate standing in the department and department chairperson approval. No more than 3 credit hours will be allowed in one plan of study. Offered in courses/credit.

704. Introduction to Educational Statistics. (3). An introduction to educational statistics, including measures of central tendency, measures of variability, correlation, chi square, median test, t test, and other two-way analysis of variance.
niques and research in the field. Prerequisite: CESP 803 or departmental consent.


540. Psychology of Exceptional Children. (3). Study of the conceptual and theoretical formulations, empirical evidence and research concerning behavioral characteristics of exceptional children.

552. Special Studies. (1-4). Covers specific topics identified by the department in consultation with institutions or groups of graduate students. Course procedures vary according to topics. Repeatable. Prerequisite: instructor's or departmental consent.

555. Individual Intelligence Assessment. (3). Use of individual tests for appraisal of intelligence, adaptive behavior and learning styles. Considers research and clinical theory in a lecture-discussion format, which includes some case simulation activities. Prerequisites: CESP 822 and instructor's consent.

556. Counseling Practicum. (3). Supervised practice in counseling. Requirements include at least 60 hours applied experience. Repeatable for credit. Prerequisites: CESP 824 and 825 and coordinator's consent. Must be taken within one year of completion of CESP 824.

557. Professional and Ethical Issues. (2). Study of major ethical, legal and professional issues in counseling. Prerequisites: CESP 824 and 825.

558. Diagnostic Testing. (3). Use of individual tests, rating procedures and behavioral techniques for the appraisal of perceptual development, linguistic development, classroom behavior and academic skills. Considers assessment theory and research in these areas in a lecture-discussion format, which includes some case simulation activities. Prerequisites: CESP 822, 855 and instructor's consent.

559. School-Based Interventions. (3). Focuses on planning, implementing, monitoring and evaluating interventions in the school setting with students who are experiencing academic and/or behavioral problems. Prerequisite: CESP 822 or departmental consent.


562. Presentation of Research. (1-2). A project submitted in thesis manuscript form. Repeatable for a maximum of two hours of credit. Prerequisite: CESP 860.

566. Practicum in Guidance Services. (2-3). Supervised practice in administration, test interpretation, group counseling and other activities of the department. Prerequisites: CESP 833 and instructor's consent.

567. Practicum in Group Guidance and Counseling Methods. (3). Supervised practice in group guidance and counseling. Repeatable for three hours of additional credit. The second practicum must be in a different area or have a different focus from that of the first. Prerequisites: CESP 825, 856 and instructor's consent.


881. Seminar in School Psychology. (1). Examines current trends and issues within the field of school psychology. Also considers alternative role models for the school psychologist from the standpoint of research and program development in related areas such as special education, general education and vocational psychology. Repeatable to a maximum of four hours. Prerequisite: CESP 804 or concurrent enrollment or instructor's consent.

890. Special Problems. (1-3). Directed reading and research under the supervision of a graduate instructor. Prerequisite: departmental consent.

903. Counseling Theory II. (3). In-depth critical review of research and applicability of major theories to the evaluation and design of interpersonal intervention strategy.

914. Consultation Techniques. (3). Intensive study of the literature in counseling, social psychology and administration that provides a basis for consultation techniques in the interpersonal context of school and work settings.

915. Intervention Design. (2). Gives the student further experience and skill in utilizing theories of interpersonal relations in creating macro- and micro-learning experience designs for individuals or groups experiencing dysfunctional situations. Stresses individual and organizational effectiveness assessment skills.

926. Seminar: Selected Topics. (2). Intensive study of current issues, techniques, research and application of the selected topic. Repeatable for a maximum of eight hours. Prerequisite: 15 hours of related graduate course work.

928. Seminar: Postsecondary Student Services. (2). Intensive study of issues, theories, approaches and research in topics related to postsecondary student services. Repeatable for different topics for a maximum of eight hours.

930. Marriage and Family Counseling II. (3). An advanced course on marriage and family counseling, including theory, techniques and research in the field. Prerequisite: CESP 803, 830, 30 graduate hours or permission of instructor.

934. Personality Assessment. (3). Focuses on theory and interpretation of instruments representing three major approaches to personality assessment: projective techniques, behavioral techniques and personality inventories. Includes alternative personality assessment approaches and reviews of personality theory and psychopathology. Includes supervised experience. Prerequisites: CESP 822, post-master's standing or last six hours of master's program.

946. Practicum in School Psychology. (3 or 6). Supervised practice in providing school psychological services to children in school, clinical or community agency settings. Requires at least 300 hours applied experience per three hours of credit. Repeatable for a maximum of six hours. Prerequisite: departmental consent.

947. Internship in Counseling: Internal or External. (2). The Internal Internship is normally a full-time placement, appropriate to career objectives in a position within an agency, institution or school. The External Internship is normally a series of planned placement experiences in a variety of settings designed to develop expertise in interpersonal consulting. Repeatable up to 6 hours of credit.

948. Practicum in Marriage and Family Counseling. (3). Prerequisite: CESP 930, graduate student status or departmental consent.

977. Internship in School Psychology. (2). Supervised experience as a school psychologist in a school or agency setting. Requires at least 600 hours of applied experience. Repeatable for a maximum of four hours. Prerequisites: CESP 946 and departmental consent.

990. Special Problems in Counseling and School Psychology. (1-3). Directed problems in research for specialist degree students under supervision of a graduate instructor. Prerequisites: CESP 801 and instructor's consent.

Curriculum and Instruction

Undergraduate teacher education in curriculum and instruction is a five-stage competency-based program beginning with an introduction to teaching and concluding with reflections on an extended student teaching experience. Through intensive academic and field experience combined with systematic student reflection, the goal of this program is to produce effective, informed and reflective teachers, capable of independent practice and continued professional growth.

Students begin the course work for the teacher education program when they are in their fifth hour with the Preprofessional Block (spring only) taking CI 301 and 302 concurrently. Each block thereafter contains two to four classes which must be taken concurrently. Block 1 (fall only) contains CI 311, 430 and 601 and CESP 334. Block 2 (spring only) contains CI 312 and 328 and CESP 433. Blocks 2 and 3 contain methods courses and field student teaching experiences. Block 4 contains CI 427 and 457, student teaching and a student teaching seminar. The courses in each of the blocks must be taken together and completed before entering the next set of course work.

Lower-Division Course

290. Directed Study. (2-3).

Upper-Division Courses

301. Introduction to Professional Education.
and the work of teachers.

Students acquire a knowledge and understanding of instruction: the decisions and processes by which teachers translate goals and objectives into classroom realities. Students become familiar with a wide range of practical strategies and techniques associated with various models of teaching and learn to apply these strategies and techniques in actual and simulated teaching situations. Students also acquire practical knowledge of and experience with the development and use of a wide range of instructional media and technology, including the use of computers.

Students examine and learn to use various classroom management strategies in order to maintain control, promote a positive learning climate and facilitate the achievement of instructional objectives. Prerequisites: acceptance into teacher education and CI 311, 430, 601, CESP 334 and concurrent enrollment in CESP 433 and CI 312.

402. Instructional Strategies in Math and Science: Elementary School. (5). Students examine the content and methods of instruction in their subject area and teach their subject in a variety of elementary school settings. Prerequisites: acceptance into teacher education, CI 312 and CI 328, CESP 433 and concurrent enrollment in CI 413 for a practicum experience.

406. Instructional Strategies in Social Studies: Elementary School. (3). Students examine objectives, methods of teaching, equipment and resources, and evaluation and measurement in the social studies in the elementary school. They develop a knowledge and understanding of the social studies in the elementary classroom, the students' examination of their own examination of the social studies and the development of their own examinations of the social studies. They develop a knowledge and understanding of instruction and the role of the teacher in instruction.

413. Preschool Teaching. (1-3). This field experience allows students to spend an extended period of time with children in an appropriate preschool setting where they can plan and implement instruction designed to teach objective instruction and evaluate learning outcomes. They also evaluate their own instruction, noting strengths and weaknesses and planning for improvement. Graded S/U only. Prerequisites: acceptance into teacher education, CI 311, 430 and 601, CESP 334 and concurrent enrollment in CESP 433 and CI 328.

430. Social/Multicultural Education. (3). Examines the social and multicultural foundations of education and schools in a changing society. In addition, students develop an appreciation for the changing ethnic and cultural characteristics of American schools. Prerequisites: acceptance into teacher education including successful completion of CI 301 and 302 and concurrent enrollment in CI 311 and 601 and CESP 334.

446. Student Teaching Seminar: Elementary. (1). Students study and discuss experiences emerging from student teaching including the planning of school programs and the responsibilities of a teacher. Graded Cr/No Cr only. Prerequisites: acceptance into teacher education, CI 322, 402 and 406 and concurrent enrollment in CI 427, 447 and 457.

447. Student Teaching in the Elementary School. (8-13). The primary purpose of student teaching field experience is to provide evidence that prospective teachers' growth and development are enhanced through experience in the preparation of, or by experience in the preparation of, a full complement of courses, including a full schedule for at least 10 days. Prerequisites: acceptance into teacher education, CI 322, 402 and 406 and concurrent enrollment in CI 427, 446 and 457.

448. Student Teaching in Early Childhood. (4-6). This field experience provides half-time participation in the preschool (three- and four-year-olds) under guidance of a master teacher and a college supervisor. Prerequisites: CI 322, 402 and 406 and nine semester hours of early childhood education. Prerequisites may be waived for equivalent experience with departmental consent. See CI 447 for deadlines for filing an application to enroll in student teaching.

515. Student Teaching in the Elementary School: Music. (4). Prerequisites: acceptance into teacher education, CI 328, CESP 433, methods in the subject area and concurrent enrollment in CI 427 and 457 and student teaching seminar.


544. Instructional Strategies: Secondary. (3). E - English
J - Social Studies
M - Mathematics
S - Science.

Students examine the content and methods of instruction in their subject area and teach their subject in a variety of settings. In addition, students are provided with the understanding of the development of learning and reading skills and explore instructional approaches for guiding secondary students in those skills and their...
68. Student Teaching: Secondary Social Studies. (8). Prerequisites: acceptance into teacher education, CI 413 and 454, 2.500 GPA in the major and concurrent enrollment in CI 427, 457 and student teaching seminar.

464. Student Teaching: Secondary Biology. (8). Prerequisites: acceptance into teacher education, CI 413 and 454, 2.500 GPA in the major and concurrent enrollment in CI 427, 457 and student teaching seminar.

65. Student Teaching: Secondary English. (8). Prerequisites: acceptance into teacher education, CI 413 and 454, 2.500 GPA in the major and concurrent enrollment in CI 427, 457 and student teaching seminar.

466. Student Teaching: Secondary Foreign Language. (8). Prerequisites: acceptance into teacher education, CI 312, 328 and CESP 433, 2.500 GPA in the major and concurrent enrollment in CI 427, 457 and student teaching seminar.

66. Student Teaching: Secondary Social Studies. (8). Prerequisites: acceptance into teacher education, CI 413 and 454, 2.500 GPA in the major and concurrent enrollment in CI 427, 457 and student teaching seminar.

57. Senior Seminar. (1). Students engage in reflective practice during their professional semester, reflecting on the social, cultural, philosophical and psychological foundations of education as they relate to practice.

Students examine the role of the teacher as a professional: legal concepts related to employment, the role of the teacher in the educational system, ethics of the profession, communication skills as a staff member, planning for and scheduling aides and volunteers. Provides students with the opportunity to connect field experiences with reflective practice and the WSU College of Education Teacher Education Program. Prerequisites: acceptance into teacher education and concurrent enrollment in CI 427, student teaching and student teaching seminar.

58. Student Teaching in the Elementary School: Art. (4). Prerequisites: acceptance into teacher education, CI 329 and CESP 432, 2.500 GPA in the major and concurrent enrollment in CI 427, 457 and student teaching seminar.

*Student Teaching - Secondary School. The student teaching semester is required of all students working toward a secondary certificate and is a full-time assignment. Application for approval to enroll in the program must be made in the certification office by February 1 for the fall semester or by September 1 for the spring semester. In addition, students must obtain approval from the representative of the subject area in which they wish to student teach before placement can be considered.

It is expected that students will student teach in their field of major interest. However, individuals who are well prepared in more than one field may apply to student teach in a second field, but they must take the special methods course in the second field before entering the student teaching semester.

The assignment for student teaching begins with the opening of the public school semester, and enrollees must arrange to meet from 8 a.m. to 5 p.m. daily and to be available for selected evening programs throughout the semester.

Prerequisites: acceptance into teacher education, methods in the subject area and concurrent enrollment in CI 427, 457 and student teaching seminar.

*For special areas see CI 452 through 466.

462. Student Teaching: Secondary Art. (4). Prerequisites: acceptance into teacher education, methods in the subject area, 2.500 GPA in the major and concurrent enrollment in CI 427, 457 and student teaching seminar.

601. Introduction to Exceptional Children. (2). Students examine the historical evolution of special education through litigation and legislation and understand their role in the education of special education children. They learn to recognize various handicapping conditions and use information gained about these conditions to seek and provide appropriate services for handicapped children. Prerequisites: acceptance into teacher education and concurrent enrollment in CI 341, 430 and CESP 334. Currently and previously certified teachers meet prerequisites and do not need concurrent enrollment in other courses.

615. Learning and Reading Strategies. (3). Students are provided with the understanding of the development of learning and reading strategies and explore instructional approaches for guiding secondary students in these strategies and their use in content areas.

616. Literature for Adolescents. (3). Students participate in extensive reading of literature in all genres consistent with studies of adolescents; reading interests, abilities and responses to literature. Prerequisite: acceptance into teacher education. Currently and previously certified teachers meet prerequisites.

562. Instructional Strategies: Middle Level Education. (3). Students examine the middle grades school as an organization that takes its design specifically from the analysis of 10-14 year olds, their characteristics and their needs. Students examine many curricular and instructional alternatives for middle grades education and learn to manage changes.

681. Cooperative Education (1-8). A work-related placement that integrates theory with a planned and supervised professional experience designed to complement and enhance the student's academic program. Prerequisite: 2.5 GPA. Repeatable for credit. Offered Cr/NCr.

701. Foundations of Education. (3). Students survey the various foundations areas, including philosophical, historical, social and comparative. This course is prerequisite to subsequent foundations courses. Prerequisite: graduate standing.

703. Learning Centers. (3). Students consider a variety of alternative approaches to teaching at all grade levels and subject matter areas via learning centers.

705. Introduction to the Reading Process. (3). Students examine all aspects of current reading theory and pertinent research to point out the possibilities of applying this theory and research to the actual teaching of children.

714. Activities for Human Relations I. (3). Students examine the various areas of communication and creativity. Activities in the above areas can be used by individuals and groups in instructional settings to explain, teach and enhance human relationships.

715. Activities for Human Relations II. (3). Students consider a variety of alternative activities, cooperative arrangements and self-awareness which can be used by individuals and groups in the following areas: human relationships.

720. Microcomputers in the Classroom. (2). Students become familiar with the various areas of computer applications in education...
No computer experience necessary. Students develop a working knowledge of computer functions, applications, software and languages relevant to ordinary classroom use.

721. Beginning Applesoft BASIC. (1). Students are introduced to classroom programming applications to develop a practical and working level of skills in programming Applesoft BASIC. They learn how to plan, write, debug and modify simple programs for classroom use. Prerequisite: CI 720.

722. LOGO Implementation. (3). Students are acquainted with the philosophy of LOGO, learn to teach the LOGO language in its classroom applications and develop curricular activities which stress problem solving and programming techniques. Prerequisite: CI 720.

723. Microcomputers in Reading. (3). Students become acquainted with the microcomputer in reading and language arts and are introduced to a wide variety of software available. Students are provided a framework for using computers during the teaching day.

734. Literature-Based Reading Programs. (3). Students examine specific methods for developing a literature program with children (preschool-elementary years) with specific emphasis on extending literature and media through the reading environment, language arts, the arts and creative expression. Prerequisite: graduate standing.

735. Introduction to the Gifted. (3-6). Students are introduced to the historical and socio-educational perspectives germane to gifted education, and provides an overview of the characteristics and learning needs of high aptitude students. For administrators, teachers or anyone interested in gifted education. Prerequisite: graduate standing.

740. Introduction to Early Childhood Handicapped. (3). Students are provided a basic introduction to the emerging field of early intervention for handicapped children and their families. Prerequisites: CESP 728 and CI 761.

745. Utilizing the Print Media in Classrooms. (3). Students explore various ways the print media may be utilized to teach critical thinking skills, propaganda analysis, communicative skills through word study and writing practice and improved reading through speed and comprehension practice. Course work stresses the utilization of the daily newspaper as a supplement to other materials in teaching the various school subjects and emphasizes preparation of teaching materials for the school classroom.

750. Workshops in Education. (1-4).

751, 752, 753 or 754. Special Studies in Education. (1-3). For elementary and secondary school teachers. Repeatable with advisor's consent. Prerequisite: teacher certification or departmental consent.

760. Parent Education. (3). An introduction to ways of working with parents of preschool and elementary children and an analysis of formal and informal approaches emphasizing the teacher's role in developing these procedures.

761. Early Childhood Education. (3). Students examine programs, problems and philosophy of educating children in the preschool years.

762. Instructional Strategies: Preschool Education. (3). Students examine the content and methods of instruction in preschools and observe/teach in a variety of settings. Students study teaching methods for preschool children and prepare materials to enhance the learning experiences of these children. Prerequisite: CI 761.

763. Teacher/Child Relations. (3). Students develop skills for effective communication with children from birth to age eight. Emphasizing the help building the child a positive self-image and a positive relationship with others.

764. Day-Care Services. (3). Students gain insight into instructional methods and operational procedures for day-care center workers.

Courses for Graduate Students Only

806. Introduction to Graduate Study in Elementary Education. (3). Students examine the field of elementary education, its history and trends, reasons for teaching, criteria of professionalism, program orientation and requirements and options for the student pursuing a degree.

807. Philosophy, History and Psychology of Secondary and Elementary Education. (3). Students are introduced to the historical and socio-educational perspective of high aptitude students. For administrators, teachers or anyone interested in gifted education. Prerequisite: CI 701.

808. Sociology of Education. (3). Students explore the relationship between education and society. Prerequisite: CI 701.

821. Classroom Reading Practicum. (3). Students participate in a practicum experience, delivering developmental and corrective reading instruction in a classroom setting. Prerequisite: CI 705.

823. Applied Behavior Analysis. (3). Behavior management strategies specifically needed by classroom teachers to affect academic and social outcomes. Addresses technical, theoretical and practical aspects of applied behavior analyses. Prerequisites: CI 681 and 742.

831. Evaluation Techniques in an Effective Classroom. (3). Students develop an awareness of classroom management and evaluation systems which include a variety of evaluation and management tools and formats. Prerequisite: CESP 801.

835. The Instructional Process. (3). Students learn the process of instruction to develop skill in systematic instructional planning. Includes instructional theory, systems approach and other recent approaches to instruction. Prerequisite: CESP 801.

838. Curriculum Alternatives. (3). Students examine curriculum models that are alternatives to the traditional curriculum and the socioeconomic, political and psychological factors that motivate their development. Attention to a comparison of historical and contemporary models for the curriculum. Prerequisite: CESP 801.

841. Program Organization and Delivery Systems. (3). Students learn about involving parents, utilizing community agencies and businesses, program organization and evaluation, working with paraprofessionals, being aware of current delivery systems and learning to describe the Kansas State Special Education Plan. Prerequisite: CI 886 or CI 735 or CI 740.

845. Curriculum Models. (3). Students examine school curriculum including all the experiences of children for which the school will assume responsibility. Explores the potential of this broad concept of the curriculum as a means of developing desired learning characteristics. Prerequisite: CESP 801.

847E. Practicum: Learning Disabilities. (3-6). Provides students with full-time participation in a class for learning disabled children/adolescents supervised by a master teacher and University professor, emphasizing applied teaching methods for the learning disabled, formal-informal psycho-educational assessment devices, curriculum strategies, behavior management and prescriptive remediation for academic deficits. Prerequisite: CI 886 and 888.

847L. Practicum: Educable Mentally Handicapped. (3-6). Provides students with full-time participation in a class for educable mentally handicapped children/adolescents supervised by a master teacher and University professor, emphasizing applied teaching methods for the mildly handicapped students, formal-informal psycho-educational assessment devices, curriculum strategies, behavior management and prescriptive remediation for academic deficits. Prerequisite: CI 886 and 888.

847K. Practicum: Behavior Disorders. (3-6). Provides students with full-time participation in a class for emotionally disturbed children/adolescents supervised by a master teacher and University professor, emphasizing applied teaching methods for the mildly and severely disturbed, formal-informal psycho-educational assessment devices, curriculum strategies, behavior management and prescriptive remediation for academic deficits. Prerequisite: CI 886 and 888.

847M. Practicum: Gifted. (3-6). Stresses applied teaching approaches. Provides opportunities to apply various theoretical, structural and technological methodologies related to the education of the gifted learner. Prerequisites: CI 735 and 883.

847R. Practicum: Regular Early Childhood. (3). Provides opportunities in a traditional setting for the student to develop competencies with young children by working in a classroom setting with a trained professional. Prerequisites: CESP 728, CI 761 and 762.

847S. Practicum: Center-Based Early Childhood Handicapped. (2). Provides opportunities in centers for early childhood handicapped education for the student to develop clinical competencies with handicapped young chil-
cared and their parents under the supervision of trained professionals in the field. Prerequisi-
tes: CESP 740 and CDS 815 or CI 760. Concurrent enrollment in CI 891 or 892 strongly rec-
ommended.

847T. Practicum: Home-Based Early Child-
hood Handicapped. (2). Provides opportuni-
ties in home-based education for the student to de-
velop clinical competencies with handi-
capped young children and their parents un-
der the supervision of trained professionals in the field while working in the homes of chil-
dren and parents. Prerequisites: CI 740 and CDS 815 or CI 760. Concurrent enrollment in CI 891 or 892 strongly recommended.

849. Seminar in Reading Organization. (3). Stu-
dents examine the organization and admin-
istration of reading programs and investi-
gate pertinent research in the area of reading instruction. Prerequisites: CI 705, 725 and 887.

853. Improvement of Instruction in Language Arts. (3). Students examine recent develop-
ments in the teaching of language arts in ele-
mentary and/or middle school grades: prob-
lems, concerns, methods, materials and re-
search related to listening and to oral, writ-
ten and visual communication including
"school" writing and creative writing. Stu-
dents select particular concepts and related
skills for special attention.

854. Improvement of Instruction in Social Studies. (3). Students examine recent changes in social studies curricul-
um to meet the unique needs of the gifted
learner. Explores a variety of suitable program
models including grouping, acceleration, guid-
ance and combinations of these. Prerequisite: CI 735.

858. Improvement of Instruction in Social Studies. (3). Students examine the roles and responsibilities of special educators and become acquainted with issues and challenges confronting special educators. In addition they examine alternative
approaches to the delivery of special education
services and with the social systems within which special education services are provided. Prerequisite: acceptance into the Master of Education, special education for mildly
handicapped.

887. Assessment and Analysis of the Learner. (3). Students learn the application of standard-
ized and informal evaluation techniques
including critical evaluation of standardized
tests and their appropriateness for special pop-
ulations (including reading disabled), alterna-
tive methods of assessment and intervention
techniques based on diagnostic profiles. Pre-
erequisites: CI 886 or CI 705 or CI 735.

888. Methods: Mildly Handicapped. (3). Stu-
dents master specified competencies in teach-
ing special students including use of data
based instruction; strategies for reading assess-
ment; techniques to improve reading, math
and written language skills; and strategies for
working with other teachers to facilitate main-
streaming of special students. Prerequisites: CI 886 and acceptance into the Master of Educa-
tion, special education for mildly handicapped.

890. Special Problems in Education. (1-4). Di-
rected reading and research under supervi-
sion of a graduate instructor. Prerequisite:
departmental consent.

891. Assessment for Early Childhood Handi-
capped. (3). Students study emerging and tra-
ditional models, procedures and materials in
early identification, screening and assessment
of infants and preschoolers with suspected
special needs. Concurrent enrollment in an
early childhood special education practicum
is strongly recommended. Prerequisites: CI 728,
740 and 761.

892. Methods: Early Childhood Handicapped. (3). Students demonstrate and discuss current
procedural strategies and materials used cross-
categorically with specific categorical groups
and across domains in early interventions. Con-
current enrollment in an early childhood spe-
cial education practicum is strongly recom-
mended. Prerequisites: CI 728, 740 and 761.

894. Advanced Topics in Early Childhood Handicapped. (1-4). Students participate in
topical seminars in early intervention offered periodically to facilitate opportunities for the
in-depth study of critical issues or topical research in this rapidly developing field. Pre-
erequisites: CESP 728 and CI 740, 761, 762, 847T,
891 and 892 or instructor’s consent. Repeatable
for credit.

Educational Administration and Supervision

Courses for Graduate/Undergraduate Credit

681. Cooperative Education. (1-4). A work-
related placement that integrates theory with a
planned and supervised professional experi-
ence designed to complement and enhance the
student’s academic program. Prerequisite: 2.5 GPA. Repeatable for credit. Offered Cr/NC.

750. Experienced Administrator’s Work-
shop. (1-2). Offers a variety of administrative
topics.

785. A Survey of School Administration
Today. (3). An introductory experience for stu-
dents interested in learning more about school
administration at the K-12 level. Emphasizes
the role of the administrator as applied theo-
retician, problem finder, problem solver, legal, financial expert, instructional supervisor
and human resource developer. Students will
become familiarized with the skills, understand-
ings and career commitments essential to success in school administration. Not applicable to EAS
crgraduate degree program requirements. Pre-
quisite: admission to Graduate School.

Courses for Graduate Students Only

801. Educational Administration Theory. (3). An examination of the major theories of
administration and application to specific
problems. Provides an overview of administra-
tion of the school district, especially problems
involving the community and staff. Includes
data gathering for self-evaluation of superviso-
ry potential. Prerequisites: CESP 801 and
instructor’s consent.

804. Clinical Supervision for Administra-
tors/Supervisors. (3). An examination of clini-
cally-oriented supervisory models, explicit
teaching approaches and their practice applica-
tions. Emphasizes the use of formative evalua-
tion strategies that focus on performance
issues coming from actual teaching situations
and the teacher’s guided analysis of these
issues. Also considers related responsibilities
of the supervisor for planning and organizing
staff development activities. Prerequisite: EAS
801.
826. Curriculum Management. (3). A study of curriculum philosophies, theories and developmental processes. Includes examination of recent programs and proposals, curriculum development at the building and school system levels and techniques of program evaluation.


842. School Law. (3). General concepts of law, interpretations of statutes and court decisions affecting education, and legal responsibilities of school personnel.

852. Special Studies in Educational Administration and Supervision. (1-3). Group studies in new materials, new research or innovations in advanced educational administration and supervision areas for practicing administrators or advanced students. Repeatable for credit with departmental consent. Prerequisite: departmental consent.

854. School Facilities and Resource Management. (3). Designed for those preparing to become administrators at the school-building level. Focuses upon the knowledge and skills necessary to plan and organize work groups, projects and the resources necessary to carry out day-to-day functional activities of schools. Prerequisites: EAS 801.

860. Research Seminar in Educational Administration and Supervision. (3). Designed for students in advanced study. Emphasizes development of research proposals and studies. Prerequisite: completion of master's degree or adviser's consent.

862. Presentation of Research. (1-2). A project submitted in thesis manuscript form. Repeatable for a maximum two hours of credit. Prerequisite: EAS 860.

873. Interpersonal Skills for Administrators. (3) Designed as a laboratory approach to interpersonal skills development. Students engage in simulation exercises to acquire skills in dealing with groups. Prerequisites: EAS 801 and 804.


878. Strategies for School Improvement. (3). An examination of organizational/instructional characteristics of schools as determinants of their effectiveness (e.g., pupil academic achievement). Considers various school improvement models, including programs designed specifically for elementary and secondary schools. Research studies considered examine established correlates for school effectiveness, as well as related teacher effectiveness variables. Prerequisites: EAS 801 and 804.

884. School Plant and Facilities. (3). Planning new educational facilities based upon educational programs. Includes the evaluation of existing schools, remodeling and operation and maintenance of present school plant. Prerequisite: master's degree or instructor's consent.

890. Special Problems in Administration. (1-4). Directed problems in research for master's students primarily under supervision of a graduate instructor. Prerequisite: instructor's consent.

892. Practicum/Practicum. (6). Two-semester course designed primarily for individuals who are completing an educational specialist program in Educational Administration and Supervision. Focuses on the role expectations of district-level administrators, and includes field experiences designed to emphasize knowledge and skill in administrative practices and procedures. Work is designed for each student's projected administrative interest. Students must file an application for this terminal course. Prerequisites: building-level administrator certification, all program coursework and departmental consent.

Other Courses

The following courses are still available for students enrolled prior to June 1, 1990, and may be taken only by permission.

816. The Principalship. (3).

853. School Business Administration. (3).

871. Group Processes for Administrators and Supervisors. (3).

872. Conflict Management. (3).

888. Data Management for School Administrators. (3).

891. Preservice Building Administrator Practicum. (3).

909. Planning in Educational Administration. (3).

946, 947, 948, 949. The Internship. (2, 3, 4, 5).

960. Seminar in the Process of Administration. (1-3).

Health, Physical Education and Recreation

Physical Education Teacher Preparation

Students majoring in physical education/K-12 teacher preparation must meet the general education requirements and the professional education requirements of the College of Education.

Students must fulfill the requirements for K-12 teacher preparation by completing the following courses: PE 106F, 107A (or consent), 111, 117, 201A, 201B, 201C, 201D, 210F, 229, 270, 306, 310, 311, 312, 326, 327, 328, 331, 360, 471, 472, 473, 500, 515, 530, 533, and 544.

Students majoring in physical education must meet all College of Education entrance requirements.

Field Option Specialization. Candidates may select one of the approved options: fitness or sports business. Individuals in this program must be admitted to the College of Education and must compile a grade point average of 2.500 for all hours taken and in their major area before being
admitted to a field option internship.

**Fitness**: Required courses are PE 115, 117, 201F, 229, 328, 331, 440, 470, 481, 530, 533, 544, 557, HS 331Q, Psy. 108Q, CI 720/721 or CS 105, plus at least 32 hours of approved electives.

**Sports Business**: Required courses are PE 102, 111, 117, 229, 280G, 328, 481, 530, 544 and 547, Mgmt. 101/101G, Psy. 108Q, Mkt. 300 and Mgmt. 360, plus at least 38 hours of approved electives.

**Areas of Certification**

**State certification—Health**: The courses listed must be included in any program which provides state certification endorsement in health: PE 115, Personal and Community Health (3); PE 117, Standards First Aid and Community CPR (2); PE 210, Safety Education (3); PE 229, Applied Human Anatomy (3); PE 280G, CPR, Fitness for Life (2); PE 500, Health Education K-12 (2-3); PE 502, Applied Health I (2); PE 504, Applied Health II (2); PE 530, Physiology of Exercise (3); PE 752, Special Studies in Health, Physical Education and Recreation (1-3); Biol. 120Q, Introduction to Microbiology (4); Chem. 111Q, General Chemistry (5). HS 331Q, Principals of Dietetics and Nutrition (3); Psy. 111Q, General Psychology (3); Soc. 111Q, Introduction to Sociology (3); PE 310, Methods in Physical Education (3); PE 471, Student Teaching—Physical Education (7).

**The Wichita State University certification—Coaching**: The courses listed must be included in any program which provides Wichita State certification in coaching: PE 152, Special Studies in Health, Physical Education and Recreation—Officiating Techniques (3); PE 331, Athletic Injuries and Training Techniques (2); PE 336, Theory and Organization of Basketball (2); PE 337, Theory and Organization of Track and Field (1); PE 530, Physiology of Exercise (3); PE 770, Psychology of Sport (3). Men must add PE 152, Special Studies in Health, Physical Education and Recreation—Theory and Organization of Football (2).

All students must have at least three hours from the following electives—PE 306, Emergency Water Safety and WSI Training (2); PE 201F, Gymnastics (3); PE 311, Methods and Techniques I (3); PE 312, Methods and Techniques II (3).

All students also must have at least four hours from the following: PE 201A, 201B, 201C, 201D, Introduction to Activities (2 hours each).

**Service Program**

Physical education activity courses carry one hour of credit. They fall into nine areas.

**Lower-Division Courses**

**Physical Education Activity Courses**

101. Team Activities. (1).
102. Individual Activities. (1).
103. Combatives. (1).
105. Gymnastics. (1).
106. Fitness Activities. (1).
107. Aquatics. (1).
108. Combined Activities. (1).
110. Varsity Activities. (1).

Activity courses in the service program may be repeated for credit. Students should consult their college requirements to ascertain whether the activity credits will count in a specific program.

**Professional Courses**

Professional courses for health, physical education and recreation are offered in the College of Education and, unless otherwise indicated, are open to both men and women.

**Lower-Division Courses**

111. Introduction to Physical Education (2). A survey study of health, physical education and recreation as to their identification, purpose and interrelationship in the total field of education. One hour of field experience is required in an elementary school and one hour of field experience is required in a middle school.

115. Personal and Community Health (3). Introductory course to study the multiple dimensions of personal health and the outside forces that shape health, lifestyle, disease, aging, death and dying. Responsibilities for one's health is fostered through the use of wellness inventories, lifestyle assessments, nutritional analyses and goal-setting.

117. Standard First Aid and Community CPR (2). Standard first aid and community cardiopulmonary resuscitation with certification by the American Red Cross. Students must show competency within three weeks after enrolling. Prerequisite: PE 107A or departmental consent.

150. Workshop. (1-3).

152. Special Studies in Health, Physical Education and Recreation. (1-3). Group study activities in preselected areas of health, physical education or recreation. Repeatable for credit with departmental consent. Prerequisite: departmental consent.

201A. Introduction to Activities. (2). Introduces the major student to the basic skills of badminton, tennis, and flag football.

Physical Education in the Intermediate Grades. (3). 3R; 2L. Final course in the series designed for an emphasis in elementary school physical education. Assists students in developing the necessary skills to teach physical education in grades 3-6. Includes 15 hours in laboratory experiences with intermediate grade school children. Prequisite: PE 310.

Kinesiology and Biomechanics. (3). The understanding of the kinesthetics and mechanics of human motion with respect to performance of sport activities. Prequisite: PE 229 or equivalent.

Athletic Injuries and Training Techniques. (2). 2R; 1L. Injuries common to athletic activities, emphasizing prevention, first aid treatment and care as prescribed by the team physician. Prequisite: PE 229 or equivalent.

Theory and Organization of Basketball. (2). The theory, organization, responsibilities and techniques of coaching basketball.

Theory and Organization of Track and Field. (2). The theory, organization, responsibilities and techniques of coaching track and field.

Theory and Organization of Baseball. (2). The theory, organization, responsibilities and techniques of coaching baseball.

Adaptive Physical Education. (2). Assists students in developing the necessary skills for the implementation of enjoyable physical activity into the lives of persons impaired, disabled or handicapped. In addition to classroom work, students participate in at least two hours per week in observations and physical activity with persons impaired, disabled or handicapped. Prequisite: PE 229 or equivalent and admission to teacher education block.

Methods in Physical Education and Health. (2). A survey of the methods of teaching physical education, health and wellness. Acquaints students with organizational skills and instructional materials. Not open to students in physical education. Prerequisite: admission to teacher education block.

Advanced Athletic Training Techniques I. (3). A study of professional relationships, pharmacology, injuries specific to the upper and lower extremities and related training problems.

Advanced Athletic Training Techniques II. (3). Emphasizes athletic injuries of the head, neck and trunk. Special problems, nutrition and exercise programs also are studied. Development of advanced athletic training skills.

Athletic Training Lab I, II, III, IV. (1). 1 L. Laboratory course designed to provide practical learning experiences in the prevention, first aid and care of athletic injuries. May be repeated.

Concepts in the Prescription of Exercise. (3). An introduction of techniques appropriate for screening, health appraisal and fitness assessment as required for prescribing exercise programs for persons without disease or with controlled disease. Not required for practical experience in a supervised setting outside the class. Prequisite: PE 530 or equivalent.

Fitness Practicum. (3). Application of theory to practice by assisting in campus fitness classes and the Human Performance Lab a minimum of 15 hours per week. Not repeatable. Prequisites: PE 317, 201E, 550; a 2,500 GPA or departmental consent.

Student Teaching—Physical Education—Secondary. (4). Prerequisite: completion of all courses in major field.

Student Teaching—Physical Education—Elementary. (4). Application for student teaching must be made to the coordinator of laboratory experiences prior to the semester in which the student intends to enroll. The assignment for student teaching begins with the opening of the public schools, and the student is expected to follow the public school calendar for a minimum of 15 hours per week. Not repeatable. Prerequisites: PE 481, 2,500 GPA overall and in major, and admission to College of Education.

Internship in Sport Business. (3). Culminating activity for students in the field option sport business specialization. Students spend the equivalent of full-time employment in the appropriate agency for a total of at least 520 hours. Prerequisites: PE 481, 2,500 GPA overall and in major, and admission to College of Education.

Internship in Fitness/Wellness. (8). Culminating activity for students in the fitness field option specialization. Students spend the equivalent of full-time employment in the appropriate agency for one full semester. Prerequisites: senior standing, departmental consent, PE 470, 2,500 minimum GPA overall and for major, admitted to College of Education.

Independent Study. (1-3). Prerequisite: departmental consent.

Workshop in Education. (1-4).

Special Studies in Health, Physical Education and Recreation. (1-3). Group study in a preselected area of health physical education or recreation. Repeatable for credit with departmental consent. Prerequisite: departmental consent.

Psychology of Sport. (3). An in-depth analysis of the psychology of sport and its implications for the teacher-coach.

Cooperative Education Field Study. (1-8). Goal is to provide the graduate student with a field placement which integrates theory with a planned and supervised professional experience designed to complement and enhance the student's academic program. Individualized programs must be formulated in consultation with the cooperating agency.
with appropriate graduate faculty. The plan of study for a graduate degree-bound student must be filed before approval of enrollment for cooperative education graduate credit. May be repeatable for credit with a limit of eight hours counting toward the graduate degree. Offered Cr/NC only.

Courses for Graduate Students Only

806. Recent Literature in Health, Physical Education and Recreation. (3). Survey and critical analysis of research and other pertinent materials in the field.

801. Seminar in Sports Administration. (3). Designed to provide a comprehensive overview of problems relating to sports administration programs. Sample of topics: public relations, promotion, personnel management, finance, accounting, contract management and travel.

810. Adapted Physical Education. (3). Philosophy, principles and methods of adapting physical education and recreational activities to the needs of the handicapped and the exceptional individual. Provides laboratory experience. Prerequisite: PE 530 or departmental consent.

812. Advanced Techniques in Physical Education. (3). Comprehensive coverage of selected physical activities, with special emphasis on class procedures. Includes laboratory experiences.

815. Fitness Assessment and Exercise Prescription. (3). Introduces techniques appropriate for screening, health appraisal and fitness assessment as required for prescribing exercise programs for individuals without disease or with controlled disease. Requires out of class laboratory experiences. Prerequisites: PE 530 or equivalent and graduate standing.

830. Advanced Physiology of Exercise. (3). In-depth study into the physiological basis of exercise. Includes energy metabolism, respiratory dynamics, cardiovascular function and regulation during rest, steady state and exhaustive physical activity. Special emphasis given to immediate and long term adaptation to exercise and training. Prerequisite: PE 530.

847. Internship. (6-12). Internship in selected areas of specialization in exercise science or sports administration. Prerequisite: departmental consent.

857. Internship in Exercise Science/Wellness. (6). Internship in selected area of specialization within the exercise science/wellness program. Students spend the equivalent of full-time employment in the appropriate agency for one full semester. Prerequisite: departmental consent.

860. Research Methods in Health, Physical Education and Recreation. (3). Examination of research methodology as related to topics in health, PE, recreation, sports studies and exercise science/wellness. Includes review and critical evaluation of the literature, research design and statistical processes, methodology, data collection techniques, computer-based analysis of data and thesis/report writing. Students design and complete a mini-research project.

875. Thesis Research. (1-2). Development of a research problem and proposal with the direction of a graduate faculty member. Repeatable but total credit hours counted toward degree requirements must not exceed two. Prerequisites: admission to graduate school in good standing, PE 860 and departmental consent.

876. Thesis. (1-2). Repeatable but total credit hours counted toward degree requirements must not exceed two. Students must be enrolled in this course during the semester in which all requirements for the thesis are met. Prerequisites: PE 875 and consent of the student's committee chair.

880. Analysis of Motor Skills. (3). Movement and sport skills analyzed in terms of mechanical principles by means of films and experimentation.

890. Problems in Health, Physical Education and Recreation. (1-4). Directed reading and research under supervision of a graduate instructor.

Physical Education—Recreation

The recreation program in the Department of Health, Physical Education and Recreation prepares students for positions in the management of leisure services. Specialization in therapeutic recreation and park and community are offered at the undergraduate level. The recreation program builds its curriculum on a broad general education foundation, offers professional and skills courses, and trains from many related departments of the University for competences and skills in the preparation of leaders for the recreation profession. The curriculum emphasizes the practical, as well as the theoretical, aspects of recreation by offering supervised co-op experience and internships in various recreational settings throughout Kansas and the nation.

Students majoring in recreation should meet all College of Education entrance requirements and fulfill the following program requirements:
1. 28 hours of professional core courses,
2. 32 hours of professional courses in at least one area of specialization, and
3. Work closely with the department advisers in selecting electives for their chosen areas of specialization.

Individually in this program must compile a grade point average of 2.500 for all hours taken in their major area before being admitted to the recreation internship.

Lower-Division Courses

112. Introduction to Recreation and Leisure. (3). An introduction to the professional field of recreation. A study of the historical, philosophical, sociological, psychological and economic development of leisure and recreation. Provides insights into fundamental concepts, values and functions of leisure and recreation.

126. Introduction to Therapeutic Recreation. (3). Introduces students to the field of therapeutic recreation. Content areas include history, philosophy, perspectives and concepts, characteristics of populations, types and locations of services and roles and functions of therapeutic recreation professionals. Prerequisite: PE-R 112.

224. Program Design and Leadership Methods. (3). Introduces the concept of program leadership and recreation planning. Provides basic skills in program development and supervision as a foundation for future recreation skills and professional courses. Prerequisite: PE-R 112 and 126.

227. Recreation for the Aged. (3). Characteristics of the aged; role of therapeutic recreation with the aged in institutional and community settings. Prerequisite: PE-R 112.

Upper-Division Courses

426. Administration of Recreation and Leisure Services. (3). A study of administrative procedures for park and recreation departments; organization, finance, personnel facilities, public relations and evaluation. Prerequisites: all recreation courses.

427. Internship in Recreation. (8). Students are assigned to approved field experience agencies as supervisory personnel for a minimum of 40 hours per week for a 16-week session. Both the agency and the University provide guidance and/or supervision. Prerequisite: PE-R 426.

481. Cooperative Education. (1-8). Allows students to participate in the Cooperative Education program. Offered Cr/NC only. Prerequisite: PE-R 112.

Industrial Technology

The overall goal of the Department of Industrial Technology is to provide a broad concept of industrial strategies. Within this concept students are given specific educational content that allows them to pursue a management-oriented technical profession. The curriculum is built upon a sound knowledge and understanding of materials, processes, technical management and human relations. Proficiencies in the physical sciences, mathematics and technical skills enable the graduate to address capably technical, managerial and production problems.

The Bachelor of Science degree in Industrial Technology requires the development of technical skills at postsecondary schools other than The Wichita State University. The curriculum is designed to build upon technical special-
ties (construction, computers, drafting, electricity, electronics, graphic arts, metals, power, photography, plastics, woodworking, etc.) developed at a community college or technical institution. Technical specialty competency will be evaluated by the industrial technology faculty.

Cooperative Education (work experience in the technical emphasis area) forms an integral part of this curriculum by blending the theories of the classroom with state-of-the-art experiences in industry.

Opportunities in industry may include production or construction supervision, quality assurance, process management, systems analysis, production control, cost estimating, purchasing, product design, industrial relations, tool design, prototype development and technical communications.

Admission to the industrial technology program requires a 2.500 grade point average. Students who fail to make satisfactory progress in their studies are governed by College of Education policies on probation and dismissal.

Undergraduate Minor—Technical Emphasis. This minor requires a minimum of 18 semester hours. Courses must be chosen in consultation with a department advisor.

Second-Field Teaching Endorsement. The department offers a three-course sequence resulting in a second-field endorsement in Principles of Technology. The prerequisites for the sequence are usually satisfied if the original teaching endorsement is in science or mathematics.

Graduate Courses. The Master of Education program in Curriculum and Instruction provides for an emphasis in industrial education. Courses must be selected in consultation with the student's graduate adviser. For further information consult The Wichita State University Graduate Bulletin.

Industrial Technology Major

A major in Industrial Technology requires:

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<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Education*</td>
<td>42</td>
</tr>
<tr>
<td>Technical specialty (transferred)</td>
<td>30</td>
</tr>
<tr>
<td>Industrial Technology courses</td>
<td>45</td>
</tr>
<tr>
<td>Supplemental required courses</td>
<td>15</td>
</tr>
<tr>
<td>Total Hours</td>
<td>132</td>
</tr>
</tbody>
</table>

*General Education courses must include literature. Division A: Psychology 111Q, Division B: Chemistry 111Q, Division C, and Physics 111Q, Division C.

Model Program

Freshman

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engl. 101, College English I (C or better)</td>
<td>3</td>
</tr>
<tr>
<td>Engl. 102, College English II (C or better)</td>
<td>3</td>
</tr>
<tr>
<td>Math. 111, College Algebra</td>
<td>3</td>
</tr>
<tr>
<td>Math. 123, College Trigonometry</td>
<td>3</td>
</tr>
<tr>
<td>I. Tec. 120, Drafting I</td>
<td>3</td>
</tr>
<tr>
<td>I. Tec. 121, Drafting II</td>
<td>3</td>
</tr>
<tr>
<td>Technical specialty</td>
<td>12</td>
</tr>
</tbody>
</table>

Sophomore

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phys. 111Q, Introduction to Physics</td>
<td>4</td>
</tr>
<tr>
<td>Comm. 111, Public Speaking</td>
<td>3</td>
</tr>
<tr>
<td>Psy. 111Q, General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>Chem. 111Q, General Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>Technical specialty</td>
<td>12</td>
</tr>
<tr>
<td>General Education elective</td>
<td>3</td>
</tr>
</tbody>
</table>

Junior

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Tec. 300, Concepts of Industrial Technology</td>
<td>3</td>
</tr>
<tr>
<td>I. Tec. 310, Safety, Product Liability and Litigation</td>
<td>3</td>
</tr>
<tr>
<td>I. Tec. 470, Industrial Organizational Analysis</td>
<td>3</td>
</tr>
<tr>
<td>I. Tec. 481-A, Cooperative Education Part I</td>
<td>3</td>
</tr>
<tr>
<td>Psy. 316, Industrial Psychology</td>
<td>3</td>
</tr>
<tr>
<td>Social/Behavioral Science (Division B)</td>
<td>3</td>
</tr>
<tr>
<td>Humanities (Division A) including 3 hours Literature</td>
<td>9</td>
</tr>
<tr>
<td>Industrial Production Management</td>
<td>3</td>
</tr>
</tbody>
</table>

Summer

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Tec. 480, Applied Problem Solving</td>
<td>3</td>
</tr>
<tr>
<td>I. Tec. 481-B, Cooperative Education Part II</td>
<td>3</td>
</tr>
<tr>
<td>General Education Elective</td>
<td>4</td>
</tr>
</tbody>
</table>

Senior

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Tec. 360, Industrial Design Technology</td>
<td>3</td>
</tr>
<tr>
<td>I. Tec. 400, Computer Applications in Industry</td>
<td>3</td>
</tr>
<tr>
<td>I. Tec. 430, Product Development</td>
<td>3</td>
</tr>
<tr>
<td>Mgmt 462, Leadership and Motivation</td>
<td>3</td>
</tr>
<tr>
<td>I. Tec. 320, Quality Assurance</td>
<td>3</td>
</tr>
<tr>
<td>I. Tec. 490, Senior Problems in Industrial Technology</td>
<td>3</td>
</tr>
<tr>
<td>I. Tec. 481-C, Cooperative Education Part III</td>
<td>4</td>
</tr>
</tbody>
</table>

Mgmt. 360, Management and Organizational Behavior | 3 |
I. Tec. 330, Manufacturing: Estimating, Planning and Scheduling | 3 |
I. Tec. 350, Construction: Cost Estimating, Blueprint Reading | 3 |

Lower-Division Courses

112. Construction Technology. (3). 2R; 3L. Emphasizes the understanding of technology and the scope of industry as it applies to construction. Includes occupationally oriented laboratory activities to reinforce the student's understanding of how humans plan, organize and control all available resources to produce products on a site.


120. Drafting I. (3). 2R; 3L. An introduction to orthographic projection, pictorial representations emphasizing auxiliary views, sectional views, sketching, revolutions, dimensioning, lettering and care and use of drafting instruments.

121. Drafting II. (3). 2R; 3L. A study of the products.

170. Materials and Processes. (3). 2R; 3L. A study of systematic procedures common to all materials. Through laboratory experiences in sheetmetal, benchmetals, forging, foundry and machine tools.

240. Woodwork I. (3). 2R; 3L. A study of the...
use and care of hand and power tools methods of finishing, wood technology and an overall view of the woods industry.


260. Plastics I. (3). 2R; 3L. Study of plastic materials being used in industry; fundamental operations including molding, casting, thermoforming, fabrication and finishing.

280. Electricity I. (3). 2R; 3L. A study of basic principles of electricity and electronics as related to home and industry. Emphasizes electrical theory, transmission and utilization. Laboratory activities include experimentation and fabrication of electrical components.

Upper-Division Courses

300. Concepts of Industrial Technology. (3). An introduction to industrial technology, including how materials are altered by industrial processes; utilization and application of energy systems; and the processes of industrial visual communications.

310. Safety, Product Liability and Litigation. (3). The study of corporate policies as related to accident prevention programs for safety and occupational health from the perspective of the industrial technologist. Emphasizes safety, safety education, product liability and litigation. Prerequisite: departmental consent.

320. Quality Assurance. (3). Industrial practices with respect to the control of quality of manufactured products and construction projects including standards, inspection, organization, sampling, corrective and preventive measures. Quality assurance simulations are provided. Prerequisite: departmental consent.

325. Woodwork III. (3). 2R; 3L. For advanced woodworking students with special emphasis on tools, materials and construction practices as they relate to the building trades. Prerequisite: I. Tec. 240.

328. Drafting III. (3). 2R; 3L. Development of working drawings in machine, aircraft, structural steel, electrical, architectural details, pipe, map and patent drawings—all conforming to industrial and prescribed standards. Prerequisite: I. Tec. 121.

330. Manufacturing: Estimating, Planning and Scheduling. (3). Production, planning and scheduling of human resources in relation to facilities, tools, equipment, capital and materials. Emphasizes computer data base information to enhance standardized techniques used in product and service management. Prerequisite: departmental consent.

331. Metals II. (3). 2R; 3L. A study of materials, machines and hand tools used by the metalworking industry and intermediate machine tool operations. Prerequisite: I. Tec 290.

337. Metals III. (3). 2R; 3L. A study of the structure, physical and mechanical properties of metals and the effect of heat treatment on these characteristics. An introduction to hot working metals by forging and casting, Emphasizes combining metals by oxyacetylene, arc, MIG and TIG welding techniques. Prerequisite: I. Tec 230.

340G. Appropriate Technology. (3). A study of new technological approaches and their contribution to quality living. Technological options in the production and consumption of food, clothing, shelter, energy, communication and transportation are explored and a framework developed for making wise choices within the options. This course may not be counted toward an industrial education major.

341. Woodwork II. (3). 2R; 3L. A study in design, construction and finishing of woodworking projects emphasizing woodworking machine tools, including methods and procedures used by industry. Prerequisite: I. Tec. 240.

350. Construction: Cost Estimating and Blueprint Reading. (3). Techniques of conveying information from the architect/engineer to the contractor by means of a legal document; the basic ability to implement that contractual understanding.

351. Power Mechanics II. (3). 2R; 3L. A study of motor vehicles including tune-up, electrical systems, fuel systems and engine service.

360. Industrial Design Technology. (3). An introduction to industrial design techniques emphasizing the pertinent elements of design and the procedural steps in designing products related to construction and manufacturing. Prerequisite: departmental consent.

361. Plastics II. (3). 2R; 3L. Technical information and product development and construction of molds and forms for molding, casting, laminating and thermoforming. Prerequisite: I. Tec. 260.

362. Plastics III. (3). 2R; 3L. Advanced problems in production techniques; compression and injection moldings; recent developments and experimental work. Prerequisite: I. Tec. 260.

375. Industrial Production Management. (3). An overview of the techniques and procedures used in making decisions related to the production function of an industrial organization. Includes plant layout, forecasting, scheduling, quality control and inventory planning and control. Prerequisite: departmental consent.

381. Electronics I. (3). 2R; 3L. A basic study of electronics including the function of components. Inductive circuits, networking and transistor theory as applicable to analog electronics are studied and applied through experimentation and project construction. Prerequisite: I. Tec. 280.

384. Electronics III. (3). 2R; 3L. Includes the theory, instrumentation and application of semiconductors in electronic circuits. Emphasizes utilization of integrated circuits in digital applications. Prerequisite: I. Tec. 381.

400. Computer Applications in Industry. (3). Introduction to computing methods, understanding and appreciation of micro- and mini-computer capability that impacts upon industry. Prerequisites: CS 105 or 110Q or equivalent.

413. Prestudent Teaching in Industrial Technology Education. (2). An introduction to a variety of conditions, role models, curriculum plans, classroom/laboratory methodologies and simulations. Emphasizes procedures used in industry. Prerequisites: CESP 433, CI 312 and 328.

420. Machine Control Systems. (3). The control of industrial machines through electromechanical devices. An overview of the functions that make up automation systems—open loop, closed loop, continuous and semi-continuous process and discrete parts. Programmable computers, programmable controllers and robotic applications also are included. Prerequisite: departmental consent.

426. Woodwork IV. (3). 2R; 3L. Advanced work for specialists in the woodworking field emphasizing problems growing from the needs of the student. Prerequisite: I. Tec. 341.

429. Drafting IV. (3). 2R; 3L. Advanced study for drafting students emphasizing problems growing from the needs of students based on past performances and progress. Includes complete dwelling and machine problems emphasizing industrial practices and procedures. Prerequisite: I. Tec. 328.

430. Product Development. (3). An application course for industrial personnel involved in product development. Emphasizes the "team" approach in formulating ideas, screening techniques, market research, feasibility studies, protection, determining profit margins, building prototypes, producibility and performance testing. Prerequisite: departmental consent.

443. Methods of Teaching in the Comprehensive General Shop. (3). 2R; 3L. Preparation for teaching industrial technology in the comprehensive general shop. Emphasizes theory, organization and operation of a comprehensive general shop program. Spring semester only. Prerequisite: departmental consent.

450. Metals IV. (3). 2R; 3L. Fundamentals of bench work and basic operations of lathes, mills, grinders, shapers and drills. Prerequisite: I. Tec. 331.

454. Instructional Strategies in Industrial Technology Education. (3). Students examine the content and methods of instruction in industrial technology education and teach their subject in a variety of settings. Prerequisites: CI 312 and 328 and CESP 433.

455. Student Teaching Seminar in Industrial Technology Education. (1). A forum for student teachers of industrial technology education to explore common interests, concerns, research and teaching techniques related to this teaching field. Prerequisites: I. Tec. 413, 454 and concurrent enrollment in I. Tec. 467.

457. Power Mechanics IV. (3). 2R; 3L. Advanced study in the power mechanics field emphasizing problems growing from the needs of the student. Prerequisite: departmental consent.
501. Preparation of Instructional Materials. (3). The selection, development, and organization of instructional materials for effective teaching of industrial technology.

519. Shop Planning and Organization. (3). Selection, purchase, and organization of shop equipment and supplies. Also includes developing and maintaining necessary records and reports and the planning of shop facilities.

570. Directed Studies in Materials and Processes. (3). Provides an opportunity for the advanced student to pursue an area of emphasis within the realm of materials and processes on a synthesis level. The method of study is research, basic and applied, or a combination thereof, in consultation with the professor; culminating in a research project and/or report. Prerequisite: departmental consent.


580. Directed Studies in Power and Energy. (3). Provides an opportunity for the advanced student to pursue an area of emphasis within the realm of power and energy on a synthesis level. The method of study is research, basic and applied, or a combination thereof, in consultation with the professor; culminating in a research project and/or report. Prerequisite: departmental consent.

590. Directed Studies in Visual Communications. (3). Provides an opportunity for the advanced student to pursue an area of emphasis within the realm of visual communications on a synthesis level. The method of study is research, basic and applied, or a combination thereof, in consultation with the professor; culminating in a research project and/or report. Prerequisite: departmental consent.

592. Desktop Publishing. (3). Desktop publishers control the entire publishing process, from creation and typesetting to printing and distribution, with equipment from the desktop. Word processing on the personal computer and laser printing are the two technological achievements that make possible a desktop publishing revolution. Stresses type design, harmony, legibility, copy fitting and layout fundamentals.

594. Offset Lithography. (3). Principles and techniques of preparing computer-generated and other original copy, processing lithographic negatives and plates, as well as operating offset printing presses. Includes laboratory. Prerequisite: departmental consent.

596. Introduction to Computer Aided Drafting (CAD). (3). Interactive computer graphics course that provides hands-on experience and basic information necessary for students to implement, modify and use a computer graphics system. Enables students to learn methods of input and output and teaches the fundamentals of CAD using various microcomputer based CAD system applications. Demonstrates mainframe CAD system applications.

598. AutoCAD. (3). A basic Computer Aided Drafting course utilizing AutoCAD software to produce mechanical and assembly type drawings.
subject area. Prerequisite: departmental consent.

785. Instructional Media. (3). Selection, use and production of educational media. Includes instructional design, media planning skills, visual literacy, slide show production, design and production of transparencies, basic photography, audio recording and mixing, video tape recording and the operation of instructional audio-visual equipment. Assignments involve the design and production of materials for teaching.

790. Special Problems in Industrial Technology. (1-4). Directed reading and research under the supervision of a graduate instructor. Prerequisite: departmental consent.

792. Explorations in Technology. (3). Participants experience the modular curriculum approach for the middle level student, including technical materials demonstration equipment and specific laboratory equipment. Teachers gain insight into methodologies for proper delivery of the curriculum and gain familiarity with the presentation format and laboratory equipment.

796. Principles of Technology 1 Methods. (3). Prepares teachers to teach Principles of Technology Units 1-7 through experiential familiarity with technical materials, equipment, videos and laboratory manuals. Emphasizes presentation format and laboratory equipment. Prerequisite: departmental consent.

797. Principles of Technology 2 Methods. (3). Prepares teachers to teach Principles of Technology Units 8-14 through experiential familiarity with technical materials, equipment videos and laboratory manuals. Emphasizes presentation format and laboratory equipment. Prerequisite: I. Tec. 796.

799. Principles of Technology 3. (3). Evaluation and synthesis of previous course work, remediation and enrichment of areas of assessed weakness regarding the principles of applied physics. Prerequisite: I. Tec. 797.

Courses for Graduate Students Only


821. Curriculum Construction in Industrial Technology. (3). Selection and construction of curriculum content for general and specialized areas of study in industrial technology. Prerequisite: I. Tec. 820.

840. Instructional Technology in Industrial Technology. (3). Designed to acquaint graduate students with the emerging technology of instruction. Includes a study of programmed instruction, systems approach to instruction, instructional television, projected media, motion films, computer-assisted instruction, learning resource centers and other pertinent topics. Students are involved in planning and preparing instructional material using systematic procedures. Prerequisite: departmental consent.


The following abbreviations are used in the course descriptions: R stands for lecture and L for laboratory. For example, 4R: 2L means four hours of lecture and two hours of laboratory.
College of Engineering

William J. Wilhelm, PhD, Dean

Modern technological developments in engineering have brought about considerable change in the College of Engineering's curriculum at The Wichita State University. The curriculum provides a vigorous, challenging experience through a broad spectrum of fundamental technical knowledge as well as courses in humanities, social sciences, communications, mathematics and physical sciences. This balance in the curriculum prepares students for professional positions in the scientific-industrial community after the bachelor's degree or allows them to continue in graduate studies for a more active participation in research and advanced study.

The College of Engineering is organized into four degree-granting departments: aerospace, electrical, industrial and mechanical. All the undergraduate engineering programs are accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET).

The programs in engineering are offered in daytime and evening classes, and the courses are the same whether they are taught in the day or at night.

Degrees Offered

Undergraduate

Undergraduate programs in the aerospace, electrical, industrial and mechanical engineering departments lead to the Bachelor of Science in each of these areas.

The college cooperates with Kansas Newman College in a dual degree program in electrical engineering and mathematics. Inquiries regarding the program should be addressed to the chair of the electrical engineering department.

Graduate

A Master of Science (MS) is offered in aerospace, electrical, industrial and mechanical engineering. A Doctor of Philosophy (PhD) also is offered by each of the four departments of engineering.

Typical fields of specialization include aerodynamics, fluid mechanics, propulsion, structures, solid mechanics, composites, dynamics and control; communication theory, signal processing, control theory, digital systems, energy and power systems; thermodynamics, heat transfer, engineering materials, engineering design, kinematics; and operations research, management science, manufacturing processes and human factors.

See The Wichita State University Graduate Bulletin for more information about the graduate program.

Policies

Admission

Students requesting a transfer to the College of Engineering must satisfy the following admission requirements:

1. An overall 2.000 grade point average and a WSU 2.000 grade point average.
2. Completion of 24 semester credit hours of college-level work.
3. Declaration of a specific engineering major.
4. Completion of each of the following courses with a grade of C or better: (a) English 101, English 102 and Communication 111; (b) Math 242Q or its equivalent; and (c) Chemistry 111Q or Physics 313Q or their equivalents.

Engineering students who have not had high school physics are permitted to register for Phys. 313Q if the mathematics prerequisite has been fulfilled. Since most students in Phys. 313Q have had some preparatory physics, students without this background should plan for extra study time in this course. Engineering students who have not had high school physics are permitted to register for Phys. 213Q. These students are then required to take Phys. 214Q when they have fulfilled prerequisites for this course, which are: Math. 243 with a grade of C or better and Phys. 213Q with a grade of B or better.

A student who has completed an associate degree based on a bachelor's oriented sequence at a state or regionally accredited Kansas community college may be accepted to the College of Engineering. The program of study must meet the requirements of the Kansas Public Community College and University Transfer and Articulation Agreement. In addition, the student's program of study must meet the ABET criteria for graduation, which are described later.

Probation

Students are placed on academic probation if any of the following grade point averages is less than 2.000 and if they have attempted at least 12 hours in that grade point average at The Wichita State University: (1) cumulative grade point average of all college/university work, (2) WSU grade point average and (3) engineering major grade point average. Attempted hours are defined as all hours appearing on the transcript with a grade of A, B, C, D, F, W, Cr, NCr, I, S or U. Academic probation is not removed until all grade point averages are at least 2.000.

Students on academic probation may not enroll for more than 12 semester hours in a 16-week term, six semester hours in an eight-week term or three hours in a four-week term. Exceptions to these limitations may be made on the recommendation of the student's department advisor with the approval of the student's department chairperson.

Academic Dismissal

Students on academic probation are subject to academic dismissal from the College of Engineering if they fail to attain a 2.000 grade point average in the next 12 cumulative hours attempted or nine hours in their major field.

Academic Advising and Enrollment

Students in the College of Engineering are invited to seek academic advice from their advisers or the department chairs any time during the school year. Engineering students and University College students with declared engineering majors are strongly urged to preregister for courses during published preregistration dates to avoid closed classes. Late registration or adding engineering courses will be allowed only during the first week of a regular semester or the first three days of a Summer Session.

Students in the College of Engineering may not enroll in more than 20 hours per semester during the academic year. Summer Session enrollments are limited to a maximum of five hours for each four-week session or ten hours during the eight-week session. Students who have completed at least 24 hours at WSU with a WSU grade point average of 3.000 or higher may petition their department chairperson for permission to enroll in excess hours.

Students who are employed full or part time should, in consultation with their academic adviser, reduce their enroll-
WSU must submit transcripts and course descriptions and syllabi to the College of Engineering for evaluation. Courses considered for transfer credit must have a grade of C or better. These courses and their prerequisites are in the departmental sections of the Catalog and are listed on the departmental check sheets. Transfer Credit

Students wishing to receive transfer credits for engineering courses taken at other institutions prior to admission to WSU must submit transcripts and course descriptions and syllabi to the College of Engineering for evaluation. Courses considered for transfer credit must have a grade of C or better.

Degree-bound WSU students should speak with an adviser before enrolling in courses at another institution.

Graduation Requirements

All engineering students must meet three sets of course requirements for graduation: (A) WSU General Education requirements, (B) College of Engineering requirements and (C) the Accreditation Board for Engineering and Technology (ABET) requirements. Guidelines for these are given below:

(A) WSU General Education requirements

(1) Communications requirements: All WSU students must complete 9 hours of communication skills: English 111, English 102 and Communication 111. All engineering students must complete these courses with a C or better. All three of these courses must be completed before students are allowed to transfer into the College of Engineering.

(2) Humanities and Social Sciences: A minimum of 9 hours must be completed in three departments in Division A (Humanities and Fine Arts) and a minimum of 6 hours in two departments in Division B (Social and Behavioral Sciences). A list of Division A and B courses acceptable to the College of Engineering is available from the college. At least 9 hours of these must be in General Studies courses (those with "G" beside the course number).

All WSU students must also complete Division C courses (Natural Science and Mathematics); however, because the engineering curriculum requires 34-36 hours of math and science, engineering students automatically satisfy Division C requirements.

For a more detailed description of the General Education requirements, see the Academic Information-General Education Program section of the Catalog.

(B) College of Engineering requirements:

(1) Mathematics and Natural Sciences: 34-36 hours of mathematics and natural sciences must be completed, as prescribed by each department. Included is a natural science elective of three or four hours to be chosen from an approved list available from the college.

(2) Core requirements (13 hours): Engr 310, Seminar in Engineering (0 hrs.); AE 223, Engineering Mechanics: Statics (3 hrs.); FE 382, Circuits I (4 hrs.); IE 255, Engineering Economy (3 hrs.), and ME 398, Thermodynamics (3 hrs.). These are courses that all engineering students must complete, regardless of major.

(3) Department requirements: Each department has specific courses that must be completed. These courses and their prerequisites are in the departmental sections of the Catalog and are listed on the departmental check sheets.

(4) Technical electives: Additional courses required, but not specified, by the department. Each should be chosen in consultation with a department adviser.

(C) ABET requirements:

(1) The equivalent of approximately 2 1/2 years of study in the area of mathematics, science and engineering. The course work should include at least one year (33-34 hours) of mathematics beyond trigonometry and basic sciences, one year (33-34 hours) of engineering sciences and one-half year (17 hours) of engineering design. The information on breakdown of engineering science and design hours of each engineering course is available from the college. Curricula described in (B) are designed to satisfy this requirement.

(2) The equivalent of one-half year (17 hours) as the minimum content in the area of humanities and social sciences. Courses treating such subjects as accounting, industrial management, finance, personnel administration and military training do not fulfill this objective. Likewise, skills, theory and technical courses in fields such as musicology, linguistics and communication do not fulfill the humanities/social science objective. A list of approved courses is available from the college.

All engineering students follow about the same general curriculum for the first two years. All engineering programs are designed to meet ABET criteria, and all courses should be selected with the assistance of a College of Engineering adviser. The recommended sequence of courses for engineering students in all departments is outlined later in this section.

Graduation grade point average requirements: The candidate for a degree must attain a 2.00 grade point average in each of the following categories:

(1) All college and university work attempted (cumulative grade point average)

(2) All work attempted at WSU (WSU grade point average)

(3) All work in the student's major

Students are not allowed credit toward graduation for D grade work in excess of one-quarter of their total hours.

Cooperative Education Program

The College of Engineering offers a cooperative education program in conjunction with the University Cooperative Education program described in this Catalog.

The co-op plan is a voluntary program in which the student works part-time (parallel program) or alternates paid pre-
professional work periods with classroom periods during the junior and senior years. The two most typical plans are illustrated in the following table.

<table>
<thead>
<tr>
<th>Year</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester</td>
<td>F</td>
<td>S</td>
<td>Su</td>
</tr>
<tr>
<td>Plan A</td>
<td>WC</td>
<td>W</td>
<td>C</td>
</tr>
<tr>
<td>Plan B</td>
<td>C</td>
<td>WC</td>
<td>WC</td>
</tr>
</tbody>
</table>

C Indicates in college  W Indicates at work

These plans make it possible for each industrial position to be filled by two students, one from Plan A and one from Plan B. Other plans can be developed in cooperation with the coordinator.

To be eligible for the co-op program, a student must demonstrate by academic performance during his freshman year the potential to complete the degree program satisfactorily. Generally this means the earning of a grade point average of 2.5 or higher. Also the student’s character and personality must be acceptable to the cooperating employer. Transfer students with the above qualifications should contact the cooperative education coordinator at the beginning of their first semester at WSU. To continue in the program, a student must maintain a satisfactory academic standing.

Students interested in participating in the program should contact the College of Engineering co-op coordinator who will provide the necessary application information. Upon acceptance into the program, the coordinator will assist the student in arranging interviews with cooperating industries.

Engineering—General Education

The following courses explore general engineering topics.

Lower-Division Courses

110. Women in Engineering Seminar. (1). Explores women’s involvement in the engineering profession and addresses skills to help women students succeed in the engineering curricula. Graded Cr/NCr.

112. Freshman Engineering Seminar. (1). Explores various engineering career opportunities and addresses skills to help engineering students succeed in the engineering curricula. Graded Cr/NCr.

125. Introduction to Engineering Concepts. (2). 4L. An introduction to the orderly approach to problem solving used in engineering by guiding the student through a comprehensive design project. Emphasizes problem formulation and solution techniques as they are required in the design project. Corequisites: Math 242Q and Engl. 101. Not open to students with more than 48 hours of credit.

Upper-Division Courses

300G. Technology and Society. (3). Division C course/elective. Demonstrates and explains—in depth but without technical jargon—developments in technology. Emphasizes conceptual understanding of interrelationships between technology and its users. Stresses responsibility of nontechnologists to be familiar with technical developments in order to control effectively technology for survival and enrichment. Uses guest lecturers and demonstrations extensively. For nonengineering majors; no credit is given toward any major in engineering. Pre-requisite: upper-division standing.

310. Seminar in Engineering. (0). Seminars on the practice of engineering, including ethics and professionalism. Each College of Engineering student is required to attend four seminars. Graded Cr/NCr only. Prerequisite: admission to the College of Engineering.

Courses for Graduate/Undergraduate Credit

510. Topics in Engineering. (1-3). Presents new or special courses of general engineering interest on sufficient demand. Repeatable for credit when subject matter warrants.

655. Computer Graphics. (3). 2R; 2L. Forms of computer graphics, input-output devices, generation of points, vectors, etc. Includes interactive versus passive graphics and the mathematics of three dimensions, projections and the hidden line problem. Includes animated movies, computer-aided design and instruction as well as applications. Prerequisites: Math 344, EE 218 or AE 227 or equivalent.

600. Integration of Engineering Concepts. (3). Designed for seniors to integrate their course work into a coherent concept of the major principles, tools and techniques of engineering. Prerequisites: senior standing, preferably taken last semester of undergraduate work.

Aerospace Engineering

Aerospace engineering students participate in an academic program which involves study in technical areas such as aerodynamic performance, propulsion, stability and control, and structures. After developing a background of academic skills in these areas, senior students complete a sequence of two courses in aircraft design.

The aerospace engineering curriculum also gives students the opportunity to develop strong fundamental knowledge in math, physics, general engineering, digital computation, written and oral communication skills, and humanities and social sciences.

Students have access to excellent laboratory facilities including six wind tunnels, a water tunnel, a computer lab and a structural testing and composite structures lab. These facilities are among the finest found in academic institutions worldwide.

Aircraft plants in Wichita, commonly called the “Air Capital of the World,” include Beech Aircraft Corporation, The Boeing Company, Cessna Aircraft Company and Learjet Corporation, making Wichita an ideal place for aerospace engineering education.

Bachelor of Science Degree in Aeronautical Engineering

Sequence of Courses

The undergraduate program requires the completion of 135 semester hours for graduation, minus advanced placement credit and plus Engr. 310. The suggested course of study for aerospace engineering students is given in the accompanying table.

Model Program

Freshman Course Hrs.

Engl. 101 and 102, College English I and II 6

Chem. 111Q, General Chemistry 5

Matl. 242Q and 243, Calculus I and II 10

Phys. 313Q and 315Q, University Physics I 5

IE 222, Engineering Graphics 3

AE 227, Engineering Digital Computation 2

Sophomore Course Hrs.

Comm. 111, Public Speaking 3

Math. 344, Calculus III 3

Math. 555, Ordinary Differential Equations with Linear Algebra 4

Phys. 314Q, University Physics II 4

AE 223, Engineering Mechanics: Statics 3

AE 324, Introduction to Aerospace Engineering 2

AE 333, Mechanics of Deformable Solids I 3

AE 373, Engineering Mechanics: Dynamics 3

ME 398, Thermodynamics I 3

Engr. 310, Seminar in Engineering 0

Junior Course

Hrs.

ME 350, Materials Engineering 4

ME 400, Fluid and Heat Flow 4

ME 498, Science of Flight 4
AE 424, Aerodynamic Theory ........................................ 4
AE 514, Flight Mechanics ............................................ 3
AE 532, Propulsion .................................................... 3
AE 525 and 625, Flight Structures I and II ....................... 6
AE 615, Introduction to Space Dynamics ......................... 3

Humanities and fine arts or social and behavioral sciences electives** ............................................. 6

Senior
Course Hrs.
AE 512, Experimental Methods in Aerospace Dynamics .......... 2
AE 607, Automatic Flight Controls I ................................ 3
IE 255, Engineering Economy ..................................... 3
EE 382, Circuits I ..................................................... 4
AE 528 and 628, Airplane Design I and II ......................... 8
Natural sciences elective* ........................................... 3
Humanities and fine arts or social and behavioral sciences electives** ............................................. 5
Technical electives .................................................. 9

*To be chosen from a list of approved courses available from the college.
**Refer to graduation requirements at the beginning of this section for details.

Students with credit in Linear Algebra may take Math. 555.

Lower-Division Courses

124. Foundations in Aerospace Engineering, (1). A fundamental introduction and overview to aerospace engineering. Historical and modern case studies are used to survey the aerodynamic, structural, dynamic, and propulsive aspects of aerospace vehicles. This course is intended for freshmen and sophomores, and limited to students who have not taken Linear Algebra and who are not concurrently enrolled in AE 324. This course may be taken by students in other engineering departments or colleges. Prerequisites: Freshman or sophomore status.

223. Engineering Mechanics: Statics, (3). The study of the condition of equilibrium of rigid bodies under the action of forces. Rigid bodies include beams, trusses, frames and machines. Consider both two and three dimensional bodies. Also includes the study of centroids, centers of gravity and moments of inertia. Corequisites: Math. 243 and Phys. 313Q.


281A. Co-op Education, (1). Introduces the student to engineering practice by working in industry in an engineering-related job and provides a planned professional experience designed to complement and enhance the student's academic program. Individualized programs must be formulated in consultation with, and approved by, appropriate faculty sponsors and cooperative education coordinators. Intended for students who will be working full time on their co-op assignment and need not be enrolled in any other course. May be repeated. Offered Cr/NC only. Prerequisites: 30 hours toward a bachelor of science in aerospace engineering degree and approval by appropriate faculty sponsor.

281P. Co-op Education, (1). Introduces the student to engineering practice by working in industry in an engineering-related job and provides a planned professional experience designed to complement and enhance the student's academic program. Individualized programs must be formulated in consultation with, and approved by, appropriate faculty sponsors and cooperative education coordinators. Students must enroll concurrently in a minimum of six hours of course work including this course in addition to a minimum of 20 hours per week at their co-op assignment. Prerequisites: successful completion of 20 hours toward an engineering degree and approval by appropriate faculty sponsor. May be repeated. Graded Cr/NC.

Upper-Division Courses


333. Mechanics of Deformable Solids I, (3). The study of the mechanical properties of materials, transformation of stresses and strains, stresses and deformations in structural elements of various shape and loading, statically indeterminate structures and buckling. Prerequisites: AE 223 and Math. 344. The latter may be taken concurrently.


481A. Co-op Education, (1). See AE 281A. Graded S/U unless student has received permission before enrolling for course to be used as a technical elective. Prerequisites: junior standing and approval by the appropriate faculty sponsor. May be repeated.

481P. Co-op Education, (1). See AE 281P. Graded S/U unless student has received permission before enrolling for course to be used as a technical elective. Prerequisites: junior standing and approval by the appropriate faculty sponsor. May be repeated.

Courses for Graduate/Undergraduate Credit

580. Systems Dynamics, (3). Lumped parameter modeling; classical, numerical, transform and state model methods of solution; introduction to systems with feedback; analogies of various physical systems. Prerequisites: AE 373 and Math. 550.


525. Flight Structures I, (3). 2R; 3L. Stress analysis of flight vehicle components. Prerequisites: AE 324, AE 333, Math. 550 and ME 350. The latter two may be taken concurrently.

527. Numerical Methods in Engineering, (3). Error analysis. Includes polynomial approximations and power series, iterative solutions of equations, matrices and systems of linear equations, numerical differentiation and integration, approximate solution of differential equa-
tions by finite differences. Prerequisites: AE 227 and Math. 550 which may be taken concurrently.


615. Introduction to Space Dynamics. (3). Orbital mechanics, orbit determination, orbital maneuvers, attitude dynamics and maneuvers. Prerequisite: AE 573.

625. Flight Structures II. (3). 2R; 3L. Strength analysis and design of flight vehicle components. Introduction to energy methods and variational principles. Application of finite element method to the analysis of flight vehicle structures. Special projects in structural analysis and design. Prerequisite: AE 528.


653. Basic Composite Material Technologies. (3). An introduction to the basic composite material technologies including mechanical behavior, material classification, testing for mechanical properties, manufacturing methods, nondestructive inspection and design. Prerequisite: AE 333.

654. Manufacturing Composite Structures. (1-2). Manufacturing methods and tooling for fiber-reinforced polymer structures and structural components. Prerequisites: ME 350 and AE 653 both recommended.

660. Selected Topics. (1-3). Prerequisite: instructor's consent.


702. Jet Propulsion. (3). Analysis of jet propulsion devices; study of cycles; effect of operating variables; presentation of problems of installation, operation and instrumentation. Prerequisite: AE 532 or equivalent.


711. Intermediate Aerodynamics. (4). A study of equations of motion, potential flow, conformal transformations, finite wing theory, non-steady airfoil theory and advanced numerical techniques in aerodynamics. Prerequisite: AE 424 or 420 or ME 621.

712. Advanced Aerodynamics Laboratory. (3). 1R; 3L. Advanced topics in wind tunnel testing including analysis and sensitivity, modeling techniques, flexure design and calibration, control surface loads and moments, laser velocimetry, hot film anemometry, dynamic signal processing, flow measurement probes, flow visualization using smoke tunnels and water tunnel. Prerequisite: AE 512 or instructor's consent.


715. Space Dynamics I. (2). Advanced trajectory analysis methods and attitude acquisition techniques. Prerequisite: AE 373.

716. Aerodynamics of Compressible Fluids I. (3). Analysis of compressible fluid flow for one- and two-dimensional cases, moving shock waves, one-dimensional flow with friction and heat addition, linearized potential functions, method of characteristics, conical shocks and subsonic similarity laws. Prerequisites: AE 424, AE 420, ME 621 or equivalent.


731. Analysis of Elastic Solids I. (3). Develops the equations of the theory of elasticity and uses them to determine stress and displacement fields in linear elastic isotropic bodies. Uses airy stress functions to obtain solutions. Introduces energy principles and variational methods. Prerequisite: instructor's consent.

733. Mechanics of Deformable Solids II. (3). An extension of AE 333. Typical topics are transformation of stress and strain in three dimensions, noncircular torsional members, curved beams, beams with unsymmetric cross sections, energy methods and the finite element method of analysis, stress concentration, theories of failure, fracture mechanics, etc. Prerequisite: AE 333.


606. Selected Topics. (1-3). Prerequisite: instructor's consent.

777. Vibration Analysis. (3). A study of free, forced, damped and undamped vibrations for one and two degrees of freedom, as well as classical, numerical and energy solutions and multidegree freedom systems. Includes continuous systems. Prerequisites: Math. 550, AE 373 and 333.

Courses for Graduate Students Only

801. Structural Dynamics II. (2). A study of vibration of strings and membranes; longitudinal, torsional and lateral vibration of bars; lateral vibration of plates and shells; classical, numerical and energy solutions; and an introduction to problems of aeroelasticity. Prerequisite: AE 777.

802. Rocket Propulsion. (2). Propulsion by solid and liquid chemical rockets; performance parameters and design components. Brief introduction to nuclear and electric propulsion. Prerequisites: AE 702 and 716.

803. Rotor Aerodynamics. (3). Aerodynamics of rotors, including propellers, wind turbines and helicopters; momentum, blade element and potential flow methods; Reynolds number and Mach number effects; helicopter dynamics, control and performance. Prerequisite: AE 711.


812. Aerodynamics of Viscous Fluids. (3). Viscous fluids flow theory and boundary layers. Prerequisite: AE 424 or 420 or ME 621.

815. Space Dynamics II. (2). Missile and interplanetary trajectory; orbital perturbations, attitude control methods and atmospheric reentry. Prerequisite: AE 715 or equivalent.

817. Transonic Aerodynamics. (2). Experimental and analytical difficulties in flow and flight near Mach one. Basic equations and solution methods: linearized potential equation; shock occurrence criteria on wings; Transonic Area Rule; nozzle throat design; detached shock wave computations; computational methods. Prerequisites: AE 424, 420 or equivalent; and AE 711 or 716.

Ho gas effects. Experimental difficulties; short time test facilities. Computational techniques; propulsion methods; airframe-engine integration; scram jets. Prerequisites: AE 711 and 716 or equivalent.

822. Finite Element Analysis of Structures. (3). Formulation of the finite element equations by variational methods; the use of isoparametric and higher order elements for analyzing two- and three-dimensional problems in solid mechanics; introduction to solutions of nonlinear problems. Prerequisites: AE 722 and 731.

831. Analysis of Elastic Solids II. (3). A continuation of AE 731 covering more advanced topics in the theory of elasticity such as the analysis of nonlinear elastic bodies and anisotropic bodies. Prerequisite: AE 731.

832. Theory of Plates and Shells. (3). Small deflections of thin elastic plates; classical solutions for rectangular and circular plates; approximate solutions for plates of various shapes; introduction to the analysis of thin shells. Prerequisite: AE 731.


834. Random Vibration. (3). Includes characterization, transmission, and failure of mechanical systems subject to random vibration. Includes analysis and measurement methods for random data. Prerequisite: instructor's consent.

860. Selected Topics. (1-3). Prerequisite: instructor's consent.

876. MS Thesis. (1-6). Graded S/U only. Repeatable toward an MS directed study project up to three hours. Graded S/U only. Prerequisite: graduate standing.

910. Airfoil Design. (3). Historical development of airfoils, underlying theories and experiments; modern airfoil design philosophies and techniques; computer-aided methods; application of computer programs for practical airfoil design problems including high lift and control devices. Prerequisites: AE 711, Math. 757.

912. Aerodynamics of Aeroelasticity. (3). A study of thin airfoils and finite wings in steady flow and thin airfoils oscillating in incompressible flow. Includes extension to compressible and three-dimensional airfoils and modern methods for low aspect ratio lifting surfaces. Prerequisites: AE 711 and 777 or instructor's consent.

916. Aerodynamics of Compressible Fluids II. (3). An exploration of perfect gas flows past bodies of revolution. Also includes axisymmetric methods of characteristics, high temperature gases in equilibrium, and frozen flows and one- and two-dimensional moving shock waves. Introduces separated flows and jet mixing. Prerequisite: AE 716.


936. Theory of Plasticity. (3). Includes criteria of yielding, including plastic stress-strain relationships and stress and deformation in thick-walled spheres, rotating discs, and cylinders, bending and torsion of prismatic bars for ideally plastic and strain-hardening materials. Includes two-dimensions and axially symmetric problems of finite deformation and variational and extremum principles. Prerequisite: AE 731.

960. Advanced Selected Topics. (1-3). Prerequisite: instructor's consent.


990. Advanced Independent Studies. (1-3). Prerequisite: instructor's consent.

Electrical Engineering
In the electrical engineering department emphasis is placed on the intensive study of physical laws appropriate to the study of modern electrical devices, including electrical machines. Courses stress the laws governing the individual behavior as well as behavior in the interconnection of devices. Analysis and synthesis of electrical networks or systems are of particular concern in specialized courses. The undergraduate program in electrical engineering is flexible enough to allow students to concentrate their electives in communications and signal processing, control systems, computer science, electric power systems, digital systems, electromagnetics and electronics.

Bachelor of Science Degree in Electrical Engineering
Sequence of Courses
Electrical engineering students must have a strong interest in mathematics and physics. As part of the curriculum, senior-level students are required to take a senior project of their own choosing under the supervision of a faculty member. The choice of subject material varies and represents a challenge in judgment and creativity in design. This program requires the completion of 132 semester hours for graduation, minus hours commensurate with advanced placement credit plus Engr. 310. Specific requirements and a suggested semester breakdown for the electrical engineering program are given in the accompanying table.
Courses for Graduate/Undergraduate Credit

585. Electrical Design Project I. (2). 3R. A design project under faculty supervision chosen according to the student's interest. Prerequisite: departmental consent. May not be counted toward a graduate electrical major.

586. Advanced Electromechanical Energy Converters. (3) A continuation of EE 488, including solid-state control. Stresses computer applications. Prerequisites: EE 492 and 488.

595. Electrical Design Project II. (2). 3R. May not be counted toward a graduate electrical major. A continuation of EE 585. Prerequisite: EE 585 or departmental consent.

598. Electric Energy Systems. (3) Concepts of electric energy systems, high-energy transmission lines, system representation, load-flow analysis, load-flow control, economic operation, symmetrical and unsymmetrical faults and system stability. Stresses computer applications. Prerequisite: EE 482.

638. Microprocessor Systems and Applications. (3) A detailed study of microprocessor architectures and addressing, assembly language programming, interrupt processing, interfacing to input/output devices and numeric coprocessors. Assembly language programs are designed and tested to illustrate the major concepts. Prerequisites: EE 482 and at least one EE course at 400 level or above.

562. Energy and Information Transmission. (2) A study of the theory and application of discrete and integrated circuits. Includes but is not limited to, feedback, active and switched-capacitor filters, nonlinear circuits, analog and digital phase-locked loops, switched-mode power conversion and RF circuits. Prerequisites: EE 492 and 480 or departmental consent. May not be counted for credit toward a graduate electrical major.


664. Introductory Control System Concepts. (3) An introduction to system modeling and simulation, dynamic response, feedback theory, stability criteria and compensation design. Prerequisite: EE 480.

686. Information Processing. (3) Properties of signals and noise; introduction to information theory; and AM, FM and pulse modulation and detection. Includes principles of sampling, coding and multiplexing and the organization of analog and digital systems for information processing. May not be counted toward a graduate electrical major. Prerequisite: EE 480 and either Stat 471 or EE 354.
688. Power Electronics. (4). 3R-3L. Deals with the applications of solid-state electronics for the control and conversion of electric power. Gives an overview of the role of the thyristor in power electronics application and establishes the theory, characteristics and protection of the thyristor. Presents controlled rectification, static frequency conversion by means of the DC link-converter and the cyclo converter, emphasizing frequency, and voltage control and harmonic reduction techniques. Also presents requirements of forced commutation methods as applied to DC-DC control and firing circuit requirement and methods. Introduces applications of power electronics to control AC and DC motors using new methods such as microprocessor. Prerequisite: EE 492.

689. Electrical Laboratory. (2). 4L. Provides training in laboratory methods and in experimental design methods. Consists of selected experiments related to EE 682 and several of the other prerequisites, depending on the background of the students enrolled. May not be counted for credit toward a graduate major. Prerequisites or corequisites: EE 682 and any two of EE 494, 588, 598, 638, 663 and 684.

691. Introduction to VLSI Circuit and System Design. (3). Fundamentals of integrated circuits, survey of current VLSI design; NMOS and CMOS integrated computer logical design, arithmetic units and operation, large capacity storage systems, input-output units and systems integration. Prerequisite: EE 492 or 494.

694. Digital Computer Design Fundamentals. (3). An introductory but reasonably detailed study of stored program digital computers from an integrated hardware-software approach. Includes an introduction to digital filters and initial design, arithmetic units and operation, large capacity storage systems, input-output units and systems integration. Prerequisite: EE 494 or departmental consent.

696. Principles of Power Distribution. (3). The distribution system is a vital contributor to the overall power system function of providing quality electrical service. Provides an overview view of the engineering fundamentals of distribution system. Discusses distribution system planning and automation, primary and secondary distribution networks. Presents voltage regulation, protection and reliability. Prerequisite: EE 498.

705. Embedded Systems Programming. (3). A study of the requirements and design of embedded software systems. Application of the C programming language in the implementation of embedded systems emphasizing real-time operating systems, interfacing to assembly and high-level languages, control of external devices, task control and interrupt processing. Prerequisite: EE 538.

754. Probabilistic Methods in Systems. (3). A course in random processes designed to prepare the student for work in communications controls, computer systems information theory and signal processing. Covers basic concepts and useful analytical tools for engineering problems involving discrete and continuous-time random processes. Discusses applications to system analysis and identification, analog and digital signal processing, data compression parameter estimation and related disciplines. Prerequisites: EE 480 and Stat. 471 or IE 254 or departmental consent.

781. Analog Filters. (3). A detailed study of analog filter design methods. Includes both passive and active filters. Discusses analog filter approximations; covers sensitivity and noise analyses. Prerequisite: EE 681.


786. Digital Communication Systems. (3). Presents the theoretical and practical aspects of digital and data communication systems. Includes the models and analysis of communication sources as discrete processes; basic source and channel coding; multiplexing and framing; spectral and time domain considerations related to ASK, PSK, DASK, QPSK, BPSK, MSK and other techniques appropriate for communicating digital information in both base-band and pass-band systems; intersymbol interference, errors of noise on system performance; optimum systems; and general M-ary digital systems in signal-space. Prerequisites: EE 754 and 696.

790. Independent Study in Electrical Engineering. (1-3). Arranged individual, independent study in specialized content areas in electrical engineering under the supervision of a faculty member. Repeatable for credit. Prerequisite: departmental consent.


794. Advanced Digital Systems. (3). Covers primarily two topics: (1) microprocessors and microprogramming. Presents the operation and application of microprocessors and reviews a survey of available devices. Covers the characteristics of microprogrammable architecture and presents the techniques of microprogramming. The techniques are applied on the department's microprogrammable minicomputer. Prerequisites: EE 694 and 228 or equivalent.

883. Digital Filters. (3). A study of digital filter design methods. Includes both IIR and FIR filters. Discusses software and hardware implementations; introduces two-dimensional digital filters. Prerequisite: EE 782 or departmental consent.

884. Discrete-Time Control Systems. (3). Fundamentals of input-output and state-space analysis, difference equations and state space representations; pole placement and observer design; digital programming and discrete minimum principle; linear state regulator design; equally-constrained control problems. Prerequisites: EE 684 and 782.

886. Error Control Coding. (3). Presents fundamental topics from information theory which underlie source and error control coding. Reviews topics from finite field theory and
vector spaces essential for the study of coding. Presents the concepts of code-space, sphere packing and perfect codes. Considers linear (n,K) block codes in some detail including error detection and correction concepts, parity check matrices and syndromes. Hamming codes, cyclic codes, error trapping decoding, BCH codes, burst-error-correcting codes, interleaving and product codes. Presents convolutional codes and topics such as the Viterbi algorithm for decoding. Prerequisites: EE 686 and 754.

888. Selected Topics in Antennas and Propagation. (3). Determination of characteristics of practical antenna systems; radiation patterns and antenna impedance; diffraction, horns, slots, etc.; and wave propagation in the earth's environment, including tropospheric and ionospheric phenomena. Prerequisite: EE 663.

899. Advanced Electrical Laboratory. (2). 6L. Training in fundamental experimental technology in some field of electrical specialization. Consists of selected experiments in various areas of electrical engineering. The general subject area is announced each semester the course is offered. Repeatable for credit. Prerequisite: departmental consent.

900. Topics in Control Systems. (3). A study of various concepts such as multi-loop systems, multivariable systems and sampling; nonlinear systems; and sampled-data systems. Repeatable for credit. Prerequisite: EE 684 or departmental consent.

901. State-Variable Techniques in Systems II. (3). A continuation of the study of state-space concepts in the areas of nonlinear systems and optimal and suboptimal control systems with wide classes of performance measures. Prerequisite: EE 792 or departmental consent.

902. Nonlinear Control Theory. (3). An introduction to the analysis and design of nonlinear control systems emphasizing stability. Includes stability definitions, phase-plane methods, linearization and time and frequency domain stability criteria, limit-cycle criteria and exact methods for relay control systems. Prerequisites: EE 684 and 792 or instructor's consent.

903. Operation and Control of Power Systems. (3). Acquaints electric power engineering students with power generation systems, their operation in economic mode and their control. Introduces mathematical optimization methods and applies them to practical operating problems. Introduces methods used in modern control systems for power generation systems. Prerequisite: EE 598.

904. Advanced Selected Topics in Electrical Engineering. (1-3). Presents new or specialized advanced topics in engineering. Repeatable for credit. Prerequisite: instructor's consent.


906. Spread-Spectrum Communication Systems. (3). Reviews topics from random processes, finite field and linear feedback shift register theory as necessary for the study of pseudorandom noise and maximal length sequences. Studies partial autocorrelation properties of m-sequences. Presents the need for and concepts of spread-spectrum systems. Also studies (a) direct-sequence spread-spectrum communication systems, (b) slow and fast frequency-hopping spread-spectrum systems, (c) time hopping spread-spectrum systems, (d) chirp systems, (e) hybrid spread-spectrum systems and (f) full-time体制 early-late and tau dither code tracking loops. Analyzes initial synchronization of the receiver spreading codes and the performance of spread spectrum systems in jamming environments. Presents examples of spread spectrum systems. Prerequisites: EE 786 and 754. EE 886 desirable.

907. Advanced Independent Study. (1-3). Arranged individual, independent study in specialized content areas in engineering under the supervision of a faculty adviser. Repeatable toward the PhD degree. Prerequisites: advanced standing and departmental consent.

908. Sensitivity Methods in Control Systems Design. (3). Sensitivity analysis of deterministic and stochastic systems; sources of uncertainty in control systems, e.g., plant parameter variation, time delays, small nonlinearities, noise disturbances and model reduction; quantitative study of the effects of uncertainties on system performance; low-sensitivity design strategies, state and output feedback design; sensitivity function approach, singular perturbation and model education techniques; adaptive systems and near-optimal control. Prerequisites: EE 893.

Industrial Engineering
The industrial engineering department is concerned with instruction and research in design, analysis and operation of integrated systems of people, material, equipment and money.

Students may select 12 hours of technical electives to emphasize their study of operations research, human factors or manufacturing systems. This allows students to specialize in a specific area of industrial engineering, and student's programs are determined by their own interests in consultation with their faculty advisers.

Modern, well-equipped laboratories are available to supplement classroom theory in human factors engineering, manufacturing processes and computer analysis. The industrial engineering department also has modern computer graphics facilities.

Bachelor of Science Degree in Industrial Engineering

Sequence of Courses
The industrial engineering program requires the completion of 135 semester hours for graduation, minus hours commensurate with advanced placement credit plus Engr. 310. Specific requirements and a suggested year breakdown for the industrial engineering program are given in the accompanying table.

Model Program
Freshman
Course Hrs.
Engl. 101 and 102, College English I and II .......... 6
Math. 242Q and 243, Calculus I and II ................... 10
Phys. 313Q and 315Q, University Physics I and II ....... 10

Sophomore
Course Hrs.
Chem. 111Q. General Chemistry ....................... 5
Math. 344, Calculus III ..................................... 3
EE 218, Engineering Computing Fundamentals .......... 3
IE 222, Engineering Graphics ............................ 3
Econ. 201Q, Principles of Economics I* ................ 3

Junior
Course Hrs.
EE 452, Work Analysis and Design ..................... 3
ME 350, Materials Engineering* ....................... 4
IE 524, Engineering Probability and Statistics II .... 3
IE 553, Production and Inventory Control ............. 3
IE 556, Manufacturing Methods and Materials .......... 4
IE 563, Facilities Planning and Design ................. 3
IE 565, Systems Simulation .............................. 3

Senior
Course Hrs.
IE 549, Human Factors Engineering ..................... 3
IE 554, Statistical Quality Control ..................... 3
IE 590, Industrial Engineering Design I ................ 3
452. Work Analysis and Design. (3). Design principles and techniques of work measurement, methods engineering, work sampling, predetermined time systems. Basic ergonomic principles and physiological measurement of work. Prerequisite: IE 254 or Stat. 471.

480. Selected Topics in Industrial Engineering. (1-4). New or special course material presented upon sufficient student demand. Repeatable for credit. Prerequisite: departmental consent.

481P. Co-op Education. (1). See IE 281P. Prerequisites: junior standing and approval by appropriate faculty sponsor.

Courses for Graduate/Undergraduate Credit


549. Human Factors Engineering. (3). A systematic approach to the optimization of human-technology interactions. Includes human information processing and limitations, work space design and environmental factors. Prerequisites: IE 452 and 524 or departmental consent.

553. Production and Inventory Control. (3). Quantitative techniques used in the analysis and control of production systems. Includes forecasting, inventory models, operation planning and scheduling. Prerequisite: IE 255 and 450 or 743.

554. Statistical Quality Control. (3). A study of the measurement and control of product quality using statistical methods. Includes acceptance sampling, statistical process control and total quality management. Prerequisite: IE 524.

556. Information Systems. (3). A study of the design, implementation and economic analysis of computer-based information systems. Prerequisites: IE 255 and EE 218 or AE 227.

590. Industrial Engineering Design I. (3). A design project utilizing industrial engineering principles, performance under faculty supervision, for solving practical problems. Prerequisites: IE 452, 553, 598, and department consent. Corequisites: IE 565, 566. May not be counted toward a graduate industrial engineering major.

664. Engineering Management. (3). An introduction to the design and control of technologically based projects. Considers both theoretical and practical aspects of systems models, organizational development, project planning and control, resource allocation, team development and personal skill assessment. Prerequisites: IE 254 or Stat. 471.


690. Industrial Engineering Design II. (3). Continuation of the design project initiated in IE 590 or the performance of a second industrial engineering design project. Prerequisites: IE 590 and department consent. Corequisites: IE 549, 554. May not be counted toward a graduate industrial engineering major.

720. Urban Systems. (3). Cross-listed as P. Adm. 720. Develops the principles of systems analysis and the tools by which these principles can be applied. Example applications are taken from urban problems. Emphasizes the formulation of realistic models and solutions. Develops computer techniques in class as necessary. Prerequisite: departmental consent.

740. Analysis of Decision Processes. (3). Decision analysis as it applies to capital equipment selection and replacement, process design and policy development. Exploits consideration of risk, uncertainty and multiple attributes is developed and applied using modern computer aided analysis techniques. Prerequisites: IE 254 and 255.

743. Operations Research. (4). A study of various operations research techniques including linear programming, transportation and assignment algorithms, dynamic programming, queuing models and inventory models. Prerequisites: IE 254 or Stat. 471, Math. 511 or 555 and EE 218 or AE 227. May not be taken by students who have credit in IE 480.


749. Advanced Human Factors. (3). A continu-
750. Industrial Engineering Workshops. (1-4). Various topics in industrial engineering. Prerequisite: departmental consent.

754. Reliability and Maintainability Engineering. (3). Studies problems of quantifying, assessing and verifying reliability. Presents various factors that determine the capabilities of components emphasizing practical applications. Examples and problems cover a broad range of engineering fields. Prerequisite: IE 524.

756. Decision Support Systems. (3). A study of various decision support system techniques including relational database, spreadsheets and expert systems. Prerequisite: IE 556 or departmental consent.


764. Systems Engineering and Analysis. (3). Presentation of system design process from the identification of a need through conceptual design, preliminary design, detail design and development, and system test and evaluation. Studies operational feasibility, reliability, maintainability, supportability and economic feasibility. Prerequisites: IE 254 and 255.

768. Industrial Engineering and Systems Analysis. (3). Studies problems of quantifying, assessing and verifying reliability. Presents various factors that determine the capabilities of components emphasizing practical applications. Examples and problems cover a broad range of engineering fields. Prerequisite: IE 524.

775. Computer Integrated Manufacturing. (3). A study of the concepts, components and technologies of CIM systems, enterprise models, for CIM, local area networks, CAD/CAM interfaces, information flow for CIM, shop floor control and justification of CIM systems. Prerequisite: IE 553 or instructor’s consent.

780. Topics in Industrial Engineering. (3). New or special courses are presented under this listing. Repeatable for credit when subject matter warrants.

Courses for Graduate Students Only


830. Advanced Linear Programming. (3). A study of the mathematical developments of the simplex methods, revised simplex methods, decomposition, bounded variables, parametric programming and other advanced topics in LP. Prerequisite: IE 450 or 743.

831. Nonlinear Programming. (3). An extensive treatment of constrained and unconstrained search techniques and nonlinear optimization algorithms. Prerequisites: IE 450 or 743 or departmental consent.

832. Inventory Systems. (3). A study of deterministic and stochastic inventory models and algorithms for inventory systems and their applications. Prerequisites: IE 553 or 743.

835. Applied Forecasting Methods. (3). A study of the forecasting methods, including smoothing techniques, time series analysis and Box-Jenkins models. Prerequisite: IE 524.

842. Advanced Simulation. (3). A study of advanced techniques and methods for statistically selecting input distributions for and analyzing output from simulation models. Also studies variance reduction and model validation techniques. Prerequisites: IE 565 and 524.


849. Industrial Engineering Graduate Project. (3). An independent study performed under the supervision of academic adviser for students in MSIE non-thesis option. Requires a report and an oral examination based on the study. Graded S/U only. Prerequisite: consent of student adviser.

857. Environmental Hygiene Engineering. (3). Evaluation and control of mechanical, physical and chemical environments. Environmental factors considered include heat, cold, noise, vibration, light, pressure, acceleration, radiation and air contaminants. Prerequisite: IE 549.

858. Advanced Manufacturing Processes. (3). Advanced topics in manufacturing materials and processes, including metallurgical considerations, process/property interactions, mechanics of material removal operations, tool wear, machinability, process economics and non-traditional processes. Prerequisite: IE 745.

860. Engineering Management Communications. (3). A study of the design of technical communications for specific audiences, the team writing process, the editing of your own and others’ technical writing, formal presentation of technical material and the design of visual aids.


880. Topics in Industrial Engineering. (3). New or special courses are presented under this listing on sufficient demand. Repeatable for credit when subject matter warrants.

890. Independent Study in Industrial Engineering. (3). Analysis, research and solution of a selected problem. Prerequisite: instructor’s consent.

900. Multiple Criteria Decision Making. (3). An extensive treatment of techniques for decision making where the multiple criteria nature of the problem must be recognized explicitly. Prerequisites: IE 450 or 743.

949. Work Physiology. (3). The study of cardiovascular, pulmonary and muscular responses to industrial work including aspects of endurance, strength, fatigue, recovery and the energy cost of work. Utilization of physical work capacity and job demand for task design, personnel assignment and assessment of work/rest scheduling. Prerequisite: IE 549.

950. Occupational Biomechanics. (3). Theoretical fundamentals of the link system of the body and kinetic aspects of body movement. Includes application of biomechanics to work systems. Prerequisites: IE 549 and AE 223.

956. Knowledge-Based Systems. (3). Introductions to the concepts and techniques in knowledge-based systems and expert systems. Includes design and development of knowledge-based systems using microcomputer-based software. Prerequisite: EE 218 or AE 227 or departmental consent.

960. Advanced Selected Topics. (1-3). Prerequisite: instructor’s consent.

970. Robotics Sensors. (3). A study of robotic sensors, contact and noncontact. Emphasizes automated systems. Automation components, such as sensors, actuators and microprocessors, along with the use of programmable logic controllers are discussed. Other areas of automation, such as robotics, machine vision, DNC machine tools, and their integration into automated systems are introduced in this course. Prerequisite: EE 382.

980. Topics in Industrial Engineering. (3). New or special courses are presented under this listing. Repeatable for credit when subject matter warrants.

Mechanical Engineering

Mechanical engineering is one of the broadest engineering fields. Mechanical engineers are found in virtually all productive industries, from aircraft and automotive to consumer products and building equipment. In these jobs, mechanical engineers design products, machines and processes for manufacturing. They analyze, test and develop these products, machines and manufacturing processes to attain the best performance and durability within cost and time limits. Examples of specific mechanical engineering jobs include:

- design, development and manufacturing of automotive engines and vehicle systems.
• design, development and manufacturing of gas turbine and other aircraft engines
• design and construction of electrical power plant energy conversion and generating systems
• design, development and manufacturing of consumer products, ranging from appliances such as refrigerators, washers and electric drills, to the manufacturing systems for producing facial tissue and processed foods and packaging of these items
• design and specification of heating, air-conditioning and ventilating systems used in aircraft, automobiles and buildings
• analysis of the complex flow of gases and fluids and their such as air flow in aircraft inlet ducts and fluid flow in hydraulic and pumping systems
• study of heat flow, ranging from boilers and automotive radiators to heat-management problems in orbiting spacecraft.

The mechanical engineering program prepares students for these job possibilities, as well as possible entry to graduate school for those so inclined. This is accomplished through a broad course of study that covers not only the technical aspects required, but the ethical, professional and communications skills needed to be a successful practicing engineer. The program includes components in mathematics and natural science, written and oral communications skills, humanities and social sciences, a core of engineering science subjects and a specified set of required technical courses covering the basic areas of mechanical engineering. In addition, students select elective courses that allow them to develop specialized knowledge in areas such as robotics, manufacturing, entrepreneurship, biomechanics, materials structure and behavior, heat transfer and energy conversion. Modern laboratories and a wide variety of computer facilities provide students with hands-on experience in experimental work and computer-aided design and engineering.

Bachelor of Science Degree in Mechanical Engineering

Sequence of Courses

The program requires the completion of 134 semester hours for graduation, minus hours commensurate with advanced placement credit plus Engr. 310. Specific requirements and a suggested course of study for the mechanical engineering program follow.

Model Program

Freshman

Course Hrs.
Engl. 101 and 102, College English I and II ........................................ 6
Chem. 111Q, General Chemistry ........................................... 5
Math 242Q and 243, Calculus I and II ........................................... 10
Phys. 313Q and 315Q, University Physics I and lab ........................................... 5
Comm. 111, Public Speaking ........................................... 3
Humanities and fine arts or social and behavioral sciences elective* .................. 3

Sophomore

Course Hrs.
Math. 344, Calculus III ........................................... 3
Math. 555, Ordinary Differential Equations with Linear Algebra** ........... 3
Phys. 314Q, University Physics II ........................................... 4
AE 223, Engineering Mechanics: Static ........................................... 3
AE 227, Engineering Digital Computations ........................................... 2
AE 333, Mechanics of Deformable Solids I ........................................... 3
AE 373, Engineering Mechanics: Dynamics I ........................................... 3
IE 222, Engineering Graphics ........................................... 3
ME 339, Elements of Mechanical Engineering Design ........................................... 3
ME 398, Thermodynamics I ........................................... 3
Engr. 310, Seminar in Engineering ........................................... 0
Humanities and fine arts or social and behavioral sciences elective* .................. 3

Junior

Course Hrs.
IE 255, Engineering Economy ........................................... 3
EE 382, Circuits I ........................................... 4
ME 390, Materials Engineering ........................................... 4
ME 400, Fluid and Heat Flow ........................................... 4
ME 401, Fluid and Heat Flow Lab ........................................... 1
ME 402, Mechanical Engineering Measurements ........................................... 3
ME 439, Mechanical Engineering Design I ........................................... 3
ME 502, Thermodynamics II ........................................... 3
ME 621, Fluid Mechanics ........................................... 3
Science elective ........................................... 3
Humanities and fine arts or social and behavioral sciences elective* .................. 3

Senior

Course Hrs.
ME 503, Mechanical Engineering Laboratory ........................................... 2
ME 541, Mechanical Engineering Design II ........................................... 3
ME 622, Heat Transfer ........................................... 3
ME 659, Mechanical Control ........................................... 3
ME 662, Mechanical Engineering Practice ........................................... 3
Engineering electives† ........................................................................ 12

Humanities and fine arts or social and behavioral sciences electives* .................. 8

*Refer to graduation requirements at the beginning of this section.
**Students with credit in Linear Algebra may take Math. 550.

† The following requirements concern engineering electives (12 hours required):
1. A minimum of three hours must be selected from engineering courses outside of the ME department.
2. A minimum of six hours must be selected from ME department courses. Only students with junior standing and a 3.000 or greater overall GPA or with instructor approval will be allowed to enroll in ME 700 level courses.

Lower-Division Courses

281A. Co-op Education. (1). Introduces the student to engineering practice by working in industry in an engineering-related job and provides a planned professional experience designed to complement and enhance the student’s academic program. Individualized programs must be formulated in consultation with, and approved by, appropriate faculty sponsors and cooperative education coordinators. Intended for students who will be working full time on their co-op assignment and need not be enrolled in any other course. May be repeated. Prerequisites: Successful completion of 24 hours toward an engineering degree and approval by the appropriate faculty sponsor.

281P. Co-op Education. (1). Introduces the student to engineering practice by working in industry in an engineering-related job and provides a planned professional experience designed to complement and enhance the student’s academic program. Individualized programs must be formulated in consultation with, and approved by, appropriate faculty sponsors and cooperative education coordinators. Students enrolling in ME 281P must enroll concurrently in a minimum of six hours of course work including this course in addition to a minimum of 24 hours per week on their co-op assignment. May be repeated. Prerequisites: Successful completion of 24 hours toward an engineering degree and approval by the appropriate faculty sponsor.

Upper-Division Courses

359. Elements of Mechanical Engineering Design. (3). Introduction to engineering design process: design, analysis and optimization. Basic kinematics, motion and force analysis in mechanisms such as plane linkages, gears and cams. Synthesis of plane linkages and simple cam systems. Computer applications. Prerequisites: ME 222 and AE 227 with a grade of C or better and AE 373, which may be taken concurrently.

350. Materials Engineering. (4). 3R; 3L. Study of important structural materials used in engineering, including metals, polymers and composites, primarily from a phenomenological viewpoint. Prerequisites: AE 333 and Chem. 111Q both with a C or better grade.

398. Thermodynamics I. (3). A study of the first and second laws. Applies thermodynamics analysis to thermal, mechanical and fluid syst-
400. Fluid and Heat Flow. (4). A study of pressure and velocity fields, kinematics of perfect and real fluids; dimensional analysis and similarity; temperature fields and heat transfer, conduction, convection and radiation, as well as an introduction to gas dynamics. ME 401 complements the analytic content of ME 400 with laboratory experiments designed to illustrate the concepts presented in the latter course. Prerequisites: Phys. 314Q and ME 398, both with C or better grades, and Math. 555, which may be taken concurrently.

401. Fluid and Heat Flow Laboratory. (1). 3L. Laboratory course designed to illustrate and reinforce the concepts in ME 400. Prerequisite or corequisite: ME 400.

402. Mechanical Engineering Measurements. (3). 2R; 3L. An introduction to modern measurement techniques in mechanical engineering. Prerequisites: ME 339 and 400, both with C or better grades and EE 382 which may be taken concurrently.

439. Mechanical Engineering Design I. (3). Principles of mechanical design, emphasizing practice in the application of many mechanical design elements—shafts, bearings, gears, brakes, clutches, thread fasteners, etc. Includes machine elements design, materials election, fatigue, stress concentration, statistical concepts and cost standardization. Innovative practical applications demanding integration of mechanical design with a practical device. Prerequisites: ME 399, AE 333 and Math. 555.

450. Selected Topics in Mechanical Engineering. (1-3). New or special topics presented on sufficient demand. Repeatable for credit when subject material warrants. Prerequisite: departmental consent.

451. Technical Entrepreneurship. (3). A junior/senior level course which carries design credit and integrates into the design process topics of technical entrepreneurship. The engineering student gains an appreciation for issues faced by a business in bringing a new or improved design to the marketplace. Also the student is encouraged to 'take the next step' towards taking their own engineering ideas beyond the prototype stage and to the marketplace. Exposes the student to a wide range of business topics, including market gap analysis, financial planning, incentive programs, personnel decisions, and business plan preparation, in addition to standard engineering topics. Prerequisite: junior/senior standing in engineering or instructor's consent.

469. Energy Conversion. (3). Energy conversion principles and their implementation in engineering devices including thermal mechanical, nuclear and direct energy conversion processes. Prerequisite: ME 398.

481A. Co-op Education. (1). See ME 281A. Prerequisites: junior standing and approval by the appropriate sponsor.

481P. Co-op Education. (1). See ME 281P. Prerequisite: junior standing and approval by the appropriate faculty sponsor.

Courses for Graduate/Undergraduate Credit

The courses numbered 502 through 760 are not automatically applicable toward an advanced degree in engineering. They must be approved by the student's adviser, the graduate coordinator and the chairperson of the department. Courses required for the BS degree normally are not permitted for use toward the graduate degree in mechanical engineering.

502. Thermodynamics II. (3). Continuation of ME 398, emphasizing availability, irreversibility, Maxwell's equations and thermodynamic property relations. Prerequisites: ME 398, with grade of C or better.

503. Mechanical Engineering Systems Laboratory. (2). 6L.* Selected experiments to illustrate the methodology of experimentation as applied to thermal and mechanical systems. Experiments include the measurement of performance of typical systems and evaluation of physical properties and parameters of systems. Prerequisites: ME 402, 541, 622.

541. Mechanical Engineering Design II. (3). 2R; 3L.* Applications of engineering design principles to the creative design of mechanical equipment. Problem definition, conceptual design feasibility studies, design calculations to obtain creative solutions of current real engineering problems. Introduction to human factors, economics and reliability theory. Group and individual design projects. Prerequisites: ME 350 and 439 with a grade of C or above in both.

544. Environmental Engineering. (3). Theory, analysis and design of heating, ventilating and air-conditioning systems based on psychrometrics, thermodynamics and heat transfer fundamentals. Emphasizes design procedures for space air-conditioning and heating and cooling loads in buildings. Prerequisites: ME 400 and 502.

550. Selected Topics in Mechanical Engineering. (1-3). New or special topics are presented on sufficient demand. Repeatable for credit when subject material warrants. Prerequisite: departmental consent.

562. Fluid Mechanics. (3). Continuation of fluid mechanics stem of ME 400. Analysis of steady and unsteady, incompressible and compressible, multidimensional flow fields emphasizing continuity, momentum and energy equations. Includes potential flow, boundary layer theory and fluid machinery. Prerequisites: ME 400.

562. Heat Transfer. (3). Continuation of heat transfer stem of ME 400; steady and transient multidimensional conduction, free and forced convection, radiation and combined heat transfer. Discusses various analytical methods, analogies, numerical methods and approximate solutions. Prerequisites: ME 400 and 621 (ME 621 may be taken concurrently).

630. Biomechanical Engineering. (3). Study of the physiology and biophysics of the living body from the viewpoint of basic mechanical engineering principles. Introduces and discusses various artificial organs and life support systems. Prerequisites: ME 400 and Math. 550.

641. Thermal Systems Design. (3). Modeling, simulation and optimization used as tools in the design of thermal systems. Discusses engineering design principles, characteristics of thermal equipment and economic considerations. Studies open-ended problems, including work on design projects in small groups. Prerequisites: ME 400 and 502, both with a grade of C or better.

650. Selected Topics in Mechanical Engineering. (1-3). New or special topics are presented on sufficient demand. Repeatable for credit when subject material warrants. Prerequisite: departmental consent.

662. Mechanical Engineering Practice. (3). A broad coverage of the basics of internal combustion engines with emphasis on spark ignition and diesel engines. Definition of engine types and configurations and important variables used to evaluate performance and efficiency. Fundamentals learned in thermodynamics, chemistry, and mechanical design are used to understand engine design, performance, and control. Applications discussed are focused primarily on automotive use and involve power output, fuel consumption, and exhaust emissions. Prerequisite: ME 398.

668. Internal Combustion Engines. (3). A broad coverage of the basics of internal combustion engines with emphasis on spark ignition and diesel engines. Definition of engine types and configurations and important variables used to evaluate performance and efficiency. Fundamentals learned in thermodynamics, chemistry, and mechanical design are used to understand engine design, performance, and control. Applications discussed are focused primarily on automotive use and involve power output, fuel consumption, and exhaust emissions. Prerequisite: ME 398.

678. Studies in Mechanical Engineering. (1-3). Arranged individual, independent study project. See appropriate faculty sponsor.

679. Mechanical Control. (3).* Modeling and simulation of dynamic systems. Theory and analysis of the dynamic behavior of control systems, based upon the laws of physics and linear mathematics. Concerns classical methods of feedback control systems and design. Prerequisites: ME 402 and 439.

681A. Co-op Education. (1). See ME 281A. Prerequisites: junior standing and approval by the appropriate sponsor.

681P. Co-op Education. (1). See ME 281P. Prerequisite: junior standing and approval by the appropriate faculty sponsor.

691. Energy Conversion. (3). Energy conversion principles and their implementation in engineering devices including thermal mechanical, nuclear and direct energy conversion processes. Prerequisite: ME 398.

481A. Co-op Education. (1). See ME 281A. Prerequisites: junior standing and approval by the appropriate sponsor.

481P. Co-op Education. (1). See ME 281P. Prerequisite: junior standing and approval by the appropriate faculty sponsor.
AE 373 and Math. 555 or 550.

734. Solar Engineering. (3). A study of solar energy with methods of collection conversion system analysis and economics. Emphasizes solar space and water heating systems. Prerequisite: ME 400 or departmental consent.

737. Robotics and Control. (3). A systems engineering approach to robotic science and technology. Fundamentals of manipulators, sensors, actuators, end-effectors and product design for automation. Includes kineatics, trajectory planning, control, programming and simulation, along with introduction to artificial intelligence and computer vision. Prerequisite: ME 659 or equivalent.

739. Advanced Machine Design. (3). A broad coverage of principles of mechanical analysis and design of machine elements. Emphasis will be on dynamic system modeling, prediction of natural frequencies and forced response, effect of support flexibility, failure theories used in design, and fatigue life prediction. Typical mechanical systems studies are gears, bearings, shafts, rotating machinery, and many types of spring-mass systems. Fundamentals learned in mechanics, strength of materials, and thermal sciences are used to understand mechanical system modeling, analysis, and design. Prerequisite: ME 541 or instructor's consent.

744. Advanced Environmental Engineering. (3). A continuation of ME 544 emphasizing building energy systems related to the design and selection of heating, ventilating and air conditioning equipment and distribution subsystems. Prerequisite: ME 544 or departmental consent.

747. Microcomputer-Based Mechanical Systems. (3). 2R; 1L. Microcomputer-based real-time control of mechanical systems. Familiarizes students with design and methodology of software for real-time control. Includes an introduction to the C programming language which is most relevant to interfacing and implementation of control theory in computer-based systems. Laboratory sessions involve interfacing microcomputers to mechanical systems and software development for control methods such as PID. Prerequisite: ME 659 or instructor's consent.

749. Kinematics and Dynamics of Machines. (3). Analysis and synthesis of mechanisms; force analysis of machines. Prerequisite: ME 439.

750. Special Topics in Mechanical Engineering. (1-3). New or special topics are presented on sufficient demand. Repeatable for credit when subject material warrants. Prerequisite: departmental consent.

755. Intermediate Thermodynamics. (3). Laws of thermodynamics, introduction to statistical concepts of thermodynamics, thermodynamic properties, chemical thermodynamics, Maxwell's relations. Prerequisite: ME 502 or departmental consent.


760. Fatigue and Fracture. (3). Covers fracture mechanics in metals, ceramics, polymers and composites. Suitable for graduate and undergraduate study in metallurgy and materials, mechanical engineering, civil engineering and aerospace engineering where a combined materials-fracture mechanics approach is stressed. Prerequisite: ME 350 or instructor's consent.

762. Polymeric Composite Materials. (3). A basic understanding and knowledge about the structure and mechanical properties of polymeric composite materials in detail. Both short fiber and continuum fiber composites are discussed. Emphasis is given to special design considerations for composite materials including fracture mechanics and performance of composites under adverse conditions (fatigue and impact). Prerequisite: ME 350 or equivalent course.

766. SEM and EDA. (3). Gives knowledge of Scanning Electron Microscopy (SEM). SEM is a powerful tool in materials science and engineering which can be used to analyze structural defects in materials. Both the theory and experimental methods, as well as the application of these methods, will be discussed in the course. Prerequisite: ME 590 or equivalent.

Courses for Graduate Students Only

801. Boundary Layer Theory. (3). Development of the Navier-Stokes equation, laminar boundary layers, transition to turbulence, turbulent boundary layers and an introduction to homogeneous turbulence. Prerequisite: Math. 651 or departmental consent.

829. Advanced Computer-Aided Analysis of Mechanical Systems. (3). Computational methods in modeling and analysis of spatial multibody mechanical systems. Includes Euler parameters; automatic generation of governing equations of kinematics and dynamics; numerical techniques and computational methods; computer-oriented projects on ground vehicles with suspension and steering mechanisms, crashworthiness and biodynamics. Prerequisite: ME 729 or instructor's consent.

845. Fracture. (3). Ductile and brittle fracture: phenomena and mechanisms, linear elastic fracture mechanics, transition temperature approaches, tests for fracture resistance and design methods. Prerequisite: departmental consent.


847. Applied Automation and Control Systems. (3). 2R; 1L. Control theory condensed to engineering practice with the analysis, design and construction of operating control systems. Experiments with pneumatic, hydraulic and electro-mechanical servo-systems. Implementation of feedback and feedforward control schemes for various industrial systems and machine tools. The experiments are project oriented and intended to be representative of the current state-of-the-art in classical and modern control practice. Prerequisite: ME 659 or equivalent.

850. Special Topics in Mechanical Engineering. (3). New or special topics are presented on sufficient demand. Repeatable for credit when subject material warrants. Prerequisite: departmental consent.


852. Heat Transfer-Convection. (3). Free and forced convection in laminar and turbulent flow. Includes analysis and synthesis of heat transfer equipment. Prerequisite: ME 622 or departmental consent.

853. Heat Transfer-Radiation. (3). Radiative properties of real surfaces, configuration factor analysis, radiative transfer in participating media, exchange factor analysis, Monte Carlo methods. Prerequisite: ME 622 or departmental consent.

856. Advanced Thermodynamics. (3). Statistical thermodynamics, Boltzmann Boje-Einstein and Fermi Dirac statistics, calculation of thermodynamics properties, elementary kinetic theory, introduction to irreversible thermodynamics. Prerequisite: ME 502 or departmental consent.

858. Computational Fluid Dynamics and Heat Transfer II. (3). Vector form of the Navier-Stokes and the energy equation. Generalized transformation of the flow equations to the computational domain. Numerical methods for inviscid flow equations, boundary layer type equations, "parabolized" Navier-Stokes equations and the Navier-Stokes equations. Prerequisite: ME 758 or equivalent.

860. Introduction to Ceramics. (3). Designed for mechanical engineering graduates and graduates with other engineering or science backgrounds. Emphasis on developing and understanding the significance of the basic concepts rather than methods for engineering problem solving or the detailed study of particular materials systems. Prerequisite: ME 390 or instructor's consent.

861. Similitude in Engineering. (2). Critical analysis of models and analogies as aids to engineering design. Prerequisite: departmental consent.

868. Rational Design Methods. (3). The principles of creativity, decision theory, modeling, optimization and reliability as applied to problem solving.
lems of engineering design. Prerequisite: departmental consent.


878. Directed Studies. (1-4). Graded S/U only. Repeatable for credit. Student must write a paper. Students selecting the directed study option to fulfill the degree requirement need also to take an oral examination on the study made. Prerequisite: departmental consent.

901. Advanced X-Ray Diffraction Theory. (3). First part concentrates on the fundamental X-ray diffraction theories including dynamical theory of X-ray and anomalous absorption, with which a serious student in this field must be thoroughly familiar. Second part emphasizes the general theory of X-ray diffraction in a concise and elegant form using Fourier transforms. The general theory is then applied to various atomic structures, ideal crystals, imperfect crystals, and amorphous bodies. Prerequisites: ME 750, Math. 757.

960. Advanced Selected Topics. (1-3). New or specialized advanced topics in mechanical engineering. Prerequisite: instructor's consent.


990. Advanced Independent Study. (1-16). Arranged individual, independent study in specialized content areas. Repeatable toward the PhD degree. Prerequisites: advanced standing and instructor's consent.

The following abbreviations are used in the course descriptions; R stands for lecture and L for laboratory. For example, 4R; 2L means four hours of lecture and two hours of lab.
College of Fine Arts

Rhoda-Gale Pollack, PhD, Dean

The College of Fine Arts is responsible for instruction, scholarly inquiry, performance and practice in music, dance, theatre and visual arts. The School of Art and Design, the School of Music and the School of Performing Arts—Dance and Theatre, offer both general arts study and professional training programs at the undergraduate level; professional degrees are offered at the graduate level.

Students are offered a complete spectrum of artistic endeavors, whether they are interested in professional activities, teaching careers, graduate study or acquiring an appreciation of the arts. Students have the opportunity to explore various art forms as well as to develop their ability to respond to changes and challenges within the art world. The college strives to develop and utilize new artistic techniques, current historical research and recent technical innovations to achieve these ends.

The School of Music is an accredited member of the National Association of Schools of Music and the dance program is an accredited member of the National Association of Schools of Dance. Both programs follow requirements for entrance and graduation that are in accordance with the associations' published regulations.

Degrees Offered

Undergraduate

The College of Fine Arts offers five undergraduate degrees: Bachelor of Arts (BA), Bachelor of Fine Arts (BFA), Bachelor of Art Education (BAE), Bachelor of Music (BM) and Bachelor of Music Education (BME). Graduation requirements for each degree are listed in the descriptions of the appropriate school programs.

Graduate

The Graduate School offers a program leading to the Master of Fine Arts (MFA) with concentrations in ceramics, painting, printmaking and sculpture; the Master of Arts (MA) in art education and communication/theatre; a Master of Music Education (MME) with concentrations in elementary music, instrumental music, choral music and music in special education; and a Master of Music (MM) with concentrations in history-literature, performance, piano pedagogy, instrumental conducting and theory-composition.

For information concerning requirements for entrance and curricula, consult The Wichita State University Graduate Bulletin.

Special Academic Area

Cooperative Education

The College of Fine Arts participates in the University Cooperative Education program. The program is designed to provide relevant paid employment experiences that integrate and complement the students' academic programs. Degree credit is awarded. Students are placed in a variety of positions including education and business settings in both music and art disciplines. For further information contact the fine arts coordinator in the Cooperative Education office.

Policies

Admission

All entering freshmen are enrolled in University College. Upon completing 24 semester hours of specified courses with a minimum grade point average of 2.000, students are eligible to enroll in the Schools of Art and Design, Music and Performing Arts.

Transfer students may enroll in the College of Fine Arts if their transcripts indicate they have completed a minimum of 24 semester hours with a minimum grade point average of 2.000 (C). Students with a grade average of at least 1.700, but less than 2.000, may petition for admittance.

Probation and Dismissal

Students are expected to make satisfactory progress in their studies. A student who fails to do so may be placed on probation at any time and ultimately dismissed from the University.

Students are required to maintain an overall WSU grade point average of at least 2.000. Students enrolled in either the music education or art education programs must have a cumulative grade point average of 2.500 prior to enrolling in student teaching.

Students who do not achieve or maintain the required 2.000 grade point average will be placed (or continued) on probation at the conclusion of each semester in which their overall WSU grade point average falls below 2.000. Students on probation are limited to a maximum of 12 credit hours per semester while on probation. Students will be dismissed at the end of the semester in which they accumulate 12 attempted credit hours with a semester and WSU grade point average below the minimum required after being placed on probation. Students are not academically dismissed at the end of a semester unless they began that semester on academic probation.

Transfer students admitted on probation must complete at least 12 semester hours with a minimum grade point average of 2.000 on work at Wichita State before probation may be lifted. If a grade point average of 2.000 is not achieved for the first attempted 12 hours of Wichita State work, transfer students admitted on probation will be dismissed from the University.

Students who have been dismissed for poor scholarship may be readmitted by the permission of the Curriculum and Policy Committee of their major division in the College of Fine Arts and by the University's Committee on Admissions and Exceptions.

Fine Arts—General Education

Upper-Division Course

301. An Introduction to Entrepreneurship in the Arts. (3). Helps students focus on business and marketing aspects of the arts. An examination from the artist's perspective of techniques for launching a career in the arts. Gives attention to elementary concepts of marketing artistic talents, goal setting, financing, legal issues and public demographics. Prerequisite: junior standing or departmental consent.

School of Art and Design

The School of Art and Design, a part of the College of Fine Arts, is divided into four programs: art education, art history, graphic design and studio arts—with its four areas of drawing-painting, printmaking, ceramics, and sculpture. These programs offer professional courses designed to train and educate art students who may be following either a professional or liberal program of study. The programs also allow students in other
schools and colleges to gain an understanding and appreciation of art.

Art students have excellent facilities in the McKnight Art Center and renovated Henrion Annex. The center provides extensive space for exhibiting student work. The Clayton Staples Gallery is designed specifically for undergraduate and graduate students and invitational shows. Under the auspices of the Edwin A. Ulrich Museum of Art in McKnight Art Center, students can view a wide range of exhibitions and hear a variety of visiting artists and guests and host lectures. The Lewis and Selma Miller Fund also provides programs of guest artists and lecturers of regional, national and international interest.

Policies

Students are not allowed credit toward graduation for D grade work in excess of one-fourth of the total hours. A grade average of 2.00 or better must be earned on all work taken at Wichita State that can be applied to a student’s degree.

The school will accept the transfer of only one credit hour per semester of nonresidential studio work (such as extension or correspondence courses from accredited institutions), totaling no more than six hours of the last 30 or ten hours of the total number of hours required for graduation.

The University’s general education requirements can be satisfied by all art history courses except Art H. 426.

The school controls all art work or essays submitted for credit by students and reserves the right to select certain pieces for its permanent collection.

All art materials, with the exception of certain nonexpendable equipment, must be furnished by the students.

Graduation Requirements

Bachelor of Fine Arts

The School of Art and Design offers a Bachelor of Fine Arts degree (BFA) in art history, graphic design and studio arts: ceramics, painting, printmaking and sculpture. In addition to the University’s scholastic, residence, and general education requirements (outlined in the requirements for Graduation section), candidates for this program must complete a core curriculum of 12 semester hours including Art F 110Q, Art H 121G, 122G, and 124. The specific requirements for the BFA are given in the Art Education section of the Catalog.

Bachelor of Art Education

In addition to meeting the University’s scholastic residence requirements for graduation, candidates for the BAE must complete a minimum of 137 semester hours, with 42 hours in the General Education program, 67 in the art curriculum and 31 in education. The General Education program is described in detail in the Academic Information—Requirements for Graduation section in the beginning of the Catalog. Electives must be selected in consultation with an adviser.

The art education area fulfills both the University general education requirements for graduation and the Kansas certification requirements for teaching at the secondary and elementary levels.

The specific requirements for the BAE are given in the Art Education section of the Catalog.

Departmental Requirements and Course Listings

Foundation

The following courses will be required of all undergraduate art major students effective the fall 1987 semester. Undergraduate students who matriculate as entering freshmen must complete the Foundation Visual Arts 110Q during their first two semesters. The Foundation requirements of 24 credit hours must be completed by the time students have completed 60 credit hours or junior status or prior to entry to classes where individual courses serve as prerequisites.

Transfer students with 60 hours and Foundation requirement deficiencies must complete course deficiencies no later than two semesters following entry.

Lower-Division Courses

110Q, Foundation Visual Arts, (3). Division A course/elective. A general orientation to the visual arts including the studio arts, graphic arts, art historical—cultural study and art education. Emphasizes lectures and experiential modes of learning. Studies the techniques, processes and approaches used in various arts professions as well as methods of determining meaning and value as an audience to the works of arts professionals.

124. Survey of Western Art: Modern. (3). An introduction to art through the study of a selected group of art objects produced in Europe and America from the 18th century to the present.

136. Foundation Design I. (3). An introduction to design for visual communications. A study of the elements of art and the principles of design relating to formal, Gestalt and conceptual organization of the two-dimensional surface. Includes elements of line, shape, space, texture and value. Instructional process includes lecture, critique and supervised studio practice.

145. Foundation Drawing I. (3). An introduction to drawing through the study of a selected group of selected objects produced in Europe and America from the 18th century to the present. Emphasizes the study of color and the elements of line, shape, space and texture. Includes the study of the human figure. Students develop an understanding of the structure of the figure and demonstrate a degree of facility in its representation from observation and from imagination. Structured sketchbook assignments. Lab fee. Prerequisite: Art F 136.

146. Foundation Drawing II. (3). Reinforcement and elaboration of the concepts studied in Art F 145 through introduction of abstraction, use of color, visualizations and other strategies for manipulating imagery. Students apply concepts to problems associated with composition, imaginative reconstructions and idea generation. Structured sketchbook assignments. Prerequisite: Art F 145.

189. Foundation 3-D Design. (3). Lectures, research and studio methods on the evolutionary role of three-dimensional design in contemporary society utilizing a variety of combinations of materials, techniques, forms and concepts. Also emphasizes learning to handle equipment and tools properly.

240. Foundation Life Drawing. (3). Introduction to drawing the human form emphasizing critical inquiry and analytical observation. Includes the study of skeletal and muscular structure. Students develop an understanding of the structure of the human figure and demonstrate a degree of facility in its representation from observation and from imagination. Structured sketchbook assignments. Lab fee. Prerequisites: Art F 145 and 146.

Art Education

The art education area offers a professional program for students interested in
teaching art. The art education structured program prepares majors to teach and supervise at various educational levels. All majors are required to specialize in a studio arts, graphic design, or art history area of emphasis.

Outline of Program

A total of 140 hours is required as distributed below.

<table>
<thead>
<tr>
<th>Area</th>
<th>Hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art Curriculum</td>
<td>67</td>
</tr>
<tr>
<td>Foundation visual arts</td>
<td>3</td>
</tr>
<tr>
<td>Two-dimensional, introductory</td>
<td>15</td>
</tr>
<tr>
<td>Two-dimensional, 200-300 level</td>
<td>3</td>
</tr>
<tr>
<td>Three-dimensional, introductory</td>
<td>12</td>
</tr>
<tr>
<td>Art education</td>
<td>22</td>
</tr>
<tr>
<td>Art specialization</td>
<td>9</td>
</tr>
<tr>
<td>Art history</td>
<td>3</td>
</tr>
<tr>
<td>Education (Curriculum and Instruction)</td>
<td>31</td>
</tr>
<tr>
<td>General Education program (includes 6 hrs. art history)</td>
<td>42</td>
</tr>
</tbody>
</table>

Student Teaching

Admission into the student teaching year requires senior standing (90 hours or 200 credit points); a minimum cumulative grade point average of 2.500 and 2.500 in art courses at the time of application for student teaching; a grade of C or better in College Algebra; a grade of C or better in English Composition (Eng. 101 and 102 or its equivalent); a grade of C or better in oral communication; completion of curriculum and instruction and art education prerequisites; satisfactory physical examination; and recommendation by the art education program following a formal interview. Admission to teacher education is determined early in the students' program (see College of Education—Admission to Teacher Education Programs). Students must apply for student teaching by midterm of the spring semester prior to the student teaching year. A grade of C or better in student teaching is necessary to receive a recommendation for a teaching certificate.

Graduates of the program applying for teacher certification in Kansas are required to complete the National Teachers Examination as established by the Kansas State Department of Education in order to qualify for their initial certificate. Review of course content will be required for transfer of art education credits from other institutions.

Art Minor outside the College of Fine Arts

Students in the College of Education who wish to minor in art need to complete 18 hours of art. These hours must be distributed as follows: Art F. 110Q and 145, Art E. 311 and 313; one elected studio course; and three hours of Art H. 121G or 122G. This sequence of courses does not constitute requirements for certification in art.

Lower-Division Courses

115. Human Experience and the Arts (3), Tele-course. Surveys sculpture, architecture, film, drama, music, literature, and painting. Examines each art form from four perspectives: historical context, elements of the art, form, meaning and criticism/evaluation. Course contains 30 half-hour video programs which are coordinated and integrated with the text and study guide. Requires attendance at periodic Saturday sessions.

150. Art Workshop (1-3). Repeatable for credit. Area covered is determined at the time course is offered.

220. Art and the Young Child. (1-3). Study of the developmental stages of children's art-making, the relationships between art and cognitive growth, the role of the teacher, the significance of sensory experiences and aesthetic behavior. Emphasizes the potential for creative behavior as a natural means of a child responding to environmental stimuli.

281. Cooperative Education. (1-8). Allows students to participate in the cooperative education program. Offered Cr/NCr only.

Upper-Division Courses

302. Jewelry Design/Construction. (3). Emphasizes metal working processes (forging, forming, casting, sawing, cutting, fusing, soldering) with subordinate emphasis on soft jewelry and ceramic processes applicable to jewelry.

310. Art Education in the Elementary School. (3). A study of the philosophy, psychology and sensory growth of the elementary-age student, emphasizing the content, objectives, methods and evaluation of the elementary school art program. Students teach in the Children's Art Workshop. Prerequisite: Art education major, upper-division eligibility.

311. Art Education Curriculum in the Elementary School. (1-3). A study of developmental characteristics of the elementary-age student and the development of the art program with respect to materials, skills and knowledge content.

333. Fiber Exploration. (3). Focuses on fiber experiences appropriate for the classroom on the intermediate or secondary level. Weaving, braiding and twisting techniques that result in a fabric or web are explored on various kinds of looms.

350. Art Workshop. (1-3). Repeatable for credit. Area covered is determined at the time course is offered.

410. Art Education in the Middle School/Junior High School. (3). A study of the philosophy, psychology and artistic development of the middle school/junior high school student, emphasizing the content, objectives, methods and evaluation of the middle school/junior high school art program. Students participate in a field experience in a middle school/junior high school. Prerequisite: Art E. 310 or equivalent.

433. Independent Study. (1-4). Directed independent study in art education not normally covered in other course work. Prerequisite: instructor's consent.

434. Art Education in the Senior High School. (3). A study of the philosophy, psychology and artistic development of the senior high student, emphasizing the content, objectives, methods and evaluation of the senior high school art program. Students participate in a field experience in a senior high school. Prerequisite: Art E. 310 or equivalent.

439. Micro-Computer Applications to Art Education. (3). A study of the curricular and instructional uses of the micro-computer to art education. Students learn a variety of procedures for generating computer art images for instruction and self-expression and use a variety of micro-computer software and hardware. Students write critical observations and interpretations in response to art work. Prerequisite: upper-division art major.

510Q. Stimulating Creative Behavior. (3). Division A course/elective. Includes theories of creativity; strategies for problem-solving; identifying various external and internal blocks to creativity; testing for creativity. Emphasizes the relationships of creativity, cognition and visual thinking; creative challenges; and stimuli. Emphasizes methods to elicit creative behavior. Repeatable once for credit.

514Q. Aesthetic Inquiry. (3). Division A course/elective. Focuses on contemporary trends in aesthetics relative to the visual arts. Students write critical observations and interpretations in response to art work. Prerequisite: upper-division art major.

515. Developing Visual Materials for Art Education. (3). A production laboratory that concentrates on the use of technological equipment for making multimedia programs and resources for instruction. Emphasizes the integration and selection of appropriate visual media for art instruction. Students participate in a 20-hour field experience in a school setting. Prerequisite: Art E. 310 or equivalent.

516. Art Education Practicum. (3). The development of art curriculum materials for secondary levels. Students enroll in this course the semester before student teaching. Prerequisite: concurrent enrollment in CESP 433.

517. Student Teaching Seminar in Art. (1). Analyzes problems encountered in the art
Students who wish a Bachelor of Arts in Art History must complete a total of 124 hours as distributed below:

<table>
<thead>
<tr>
<th>Area</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art Curriculum</td>
<td>83</td>
</tr>
<tr>
<td>Art history</td>
<td>33</td>
</tr>
<tr>
<td>Art/design foundation</td>
<td>9</td>
</tr>
<tr>
<td>Foreign language</td>
<td>13</td>
</tr>
<tr>
<td>Liberal arts courses (elected with direction)</td>
<td>28</td>
</tr>
<tr>
<td>General education program</td>
<td>42</td>
</tr>
</tbody>
</table>

**Courses for Graduate Students Only**

815. Individual Research Problems in Art Education. (1-4). Directed independent study in art education not normally covered in other graduate course work. Repeatable for credit. Prerequisite: Instructor's consent.

816-817. Thesis—Art Education. (1-3; 1-3).

818-819. Terminal Project—Art Education. (1-3; 1-3).

**Art History**

The art history area offers both major and minor emphases, as well as professional support courses for art education, graphic design and studio arts programs. Students develop a fundamental knowledge of art within a cultural and historical framework, and a basic understanding of art terms, concepts and theory relevant to all visual arts studies. Advanced levels prepare students for professional pursuit of art history, museum studies, conservation, criticism and college or secondary level teaching.

**Requirements.** Students who wish a Bachelor of Fine Arts degree in Art History must complete a total of 125 hours as distributed below:

<table>
<thead>
<tr>
<th>Area</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core</td>
<td>12</td>
</tr>
<tr>
<td>Art history</td>
<td>33</td>
</tr>
<tr>
<td>Art/history electives</td>
<td>18</td>
</tr>
<tr>
<td>Foundation</td>
<td>18</td>
</tr>
<tr>
<td>Fine arts electives—music</td>
<td>9</td>
</tr>
<tr>
<td>History, aesthetic inquiry, etc.</td>
<td>6</td>
</tr>
<tr>
<td>Foreign language</td>
<td>13</td>
</tr>
<tr>
<td>Liberal arts electives</td>
<td>12</td>
</tr>
<tr>
<td>General education program</td>
<td>42</td>
</tr>
</tbody>
</table>

**Bachelor of Arts in Art History**

**Requirements.** Students who wish a Bachelor of Arts degree in Art History must complete a total of 124 hours as distributed below:

<table>
<thead>
<tr>
<th>Area</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core</td>
<td>12</td>
</tr>
<tr>
<td>Art history</td>
<td>33</td>
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<td>18</td>
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<td>18</td>
</tr>
<tr>
<td>Fine arts electives—music</td>
<td>9</td>
</tr>
<tr>
<td>History, aesthetic inquiry, etc.</td>
<td>6</td>
</tr>
<tr>
<td>Foreign language</td>
<td>13</td>
</tr>
<tr>
<td>Liberal arts electives</td>
<td>12</td>
</tr>
<tr>
<td>General education program</td>
<td>42</td>
</tr>
</tbody>
</table>

**Art History Minors**

All students in or outside the College of Fine Arts may minor in art history by completing 18 hours of course work. These include Art H. 121G, 122G, 123, 124 or approved substitutes and two advanced courses.

**Lower-Division Courses**

100. Introduction to Art in the Western World. (3). Provides general students (not art majors) with some visual and intellectual tools, enabling them to confront and experience a number of the more significant works of art in the history of Western Culture. Using selected monuments, presented in chronological order, the course not only introduces an analysis of these works in a historical sequence, but simultaneously focuses on a number of types of artistic events typical in the development of our art--evolution of style seen as progress, abrupt reversals or rejections, revivals, cultural contri-
null through teaching, art used as propaganda, art as decor, art as economic value, art as the expression of class, etc.

121G. Survey of Western Art: Ancient. (3). Division A course/elective. A historical survey of art of Egypt, Greece and Rome.

122G. Survey of Western Art: Renaissance and Baroque. (3). Division A course/elective. A historical survey of art from the Renaissance to the 18th century.

123. Survey of Western Art: Medieval. (3). A historical survey of early Christian and Gothic art and architecture from the 5th through 18th centuries.

124. Survey of Western Art: Modern. (3). An introduction to art through the study of a selected group of art objects produced in Europe and America from the 18th century to the present.

223. Northern Renaissance. (3). A study of French, Flemish and German painting from Parisian illumination in the 14th century to Durer.

281. Cooperative Education. (1-6). Allows students to participate in the cooperative education program. Offered Cr/NCr only.

Upper-Division Courses

322. Medieval Art I. (3). A study of the art of Europe and Byzantium from the time of Constantine to Charlemagne. Emphasizes style and iconography as it develops in mosaics and illustrated manuscripts.

323. Medieval Art II. (3). A study of Romanesque and Gothic architecture and sculpture with special attention to the developments in France.

324. Northern Baroque. (3). A study of the art of Flanders and Holland during the 17th century. While a variety of artistic expression is shown with examples from a great many artists, the discussion culminates in an extensive study of the two dominant figures, Peter Paul Rubens and Rembrandt van Rijn.

325. Art of the Ancient Near East and Egypt. (3). Survey of the arts of ancient Egypt and Mesopotamia, concluding with a consideration of the interaction between Near Eastern art and classical art.

421Q. Art of Ancient Greece. (3). A study of the development of Greek art from the Archaic to Hellenistic periods. Covers architecture, sculpture and painting emphasizing sculpture and the art of Periclean Athens.

422. Art of Ancient Rome. (3). A study of the development of the art of imperial Rome from the age of Augustus to the age of Constantine the Great.

426. Seminar: Techniques of Art History. (3). A culminating study for senior art history majors which considers the history of the discipline; its research methods and theory. Requires extensive readings and reports. Prerequisite: instructor’s consent.


Courses for Graduate/Undergraduate Credit

520. Seminar in Art History. (3). Systematic study in selected areas of art history. Course content varies but individual areas are not repeatable for credit.

521Q. Italian Renaissance. (3). Division A course/elective. A study of the architecture, sculpture and painting from the 13th to the 16th century. Emphasizes early developments in Florence and Siena and late developments in Rome.

522. Italian Baroque. (3). A study of Baroque painting, sculpture and architecture in Rome, Venice and Bologna from 1600 to 1750 emphasizing the Carracci, Caravaggio, Bernini and Tiepolo.

523. 18th and 19th Century European Art. (3). A history of European art from Watteau through post-Impressionism.

524. 18th and 19th Century American Art. (3). A history of American art from the colonial period through the 19th century.


528. Museum Techniques I. (3). Primarily for the graduate student interested in museum work. Includes specialized research related to administrative responsibilities of a museum: collection, exhibition, recording, preservation and financial activities.

529. Modern Architecture. (3). An overall view of the development of modern architecture from its inception in the early 20th century until today. Stresses theoretical connections between architecture and the arts of painting and sculpture as they developed in the United States and Europe.

530. The Art of Classical Greece. (3). A study of painting, sculpture and architecture of Greece during the 5th and 4th centuries B.C.

531. The Art of Hellenistic Greece. (3). A study of the painting, sculpture and architecture of Greece during the Hellenistic period, 4th to 1st centuries B.C.

532. Independent Study in Art History. (1-3). Work in a specialized area of study of art history. Directed readings and projects. Prerequisite: instructor’s consent.

Courses for Graduate Students Only


832. Independent Study. (1-3). Individually supervised work in a specialized area of the study of art history. Directed readings, research and projects. Repeatable for credit. Prerequisites: suitable preparation for graduate work in art history (e.g., BA or BFA in art history) and instructor’s consent.

Graphic Design—Commercial Art

The graphic design area offers a professional program for students interested in a career in the field of visual communication. The courses emphasize conceptual and practical problem solving in various media—photography, typography, computer graphics, design and drawing—to develop design skills for communication.

Requirements. A minimum total of 126 hours is required for a major as distributed below.

Students with junior standing participate in a Junior Portfolio Review prior to counseling for their senior year.

Area Hrs.
Art curriculum (minimum)..........................84
Art/design foundation............................24
Graphic design core...............................33
Graphic design electives
(300-500 level)..................................27
General education program (includes
6 hrs. art history).................................42

The following are the specific requirements for the art curriculum section:
1. Students must fulfill requirements of...
the foundation program (24 hours): Art F. 110Q, Foundation Visual Arts; Art F. 136 and 137, Foundation Design I and II; Art F. 145 and 146, Foundation Drawing I and II; Art F. 189, Foundation 3-D Design; Art F. 240, Foundation Life Drawing; Art H. 124, Art History Survey-Modern.

2. Students must fulfill requirements of the graphic design core as specified (36 hours): Art G. 233, Basic Typography; Art G. 234, Layout and Production Techniques; Art G. 239, Design Structure; Art G. 330, Still Photography for Graphic Design; Art G. 331, Film/Video for Graphic Design, Art G. 334, Graphic Design—Production; Art G. 335 and 435, Graphic Design Studio I and II; Art G. 430, Television for Graphic Design; Art G. 445, Senior Terminal Project; upper division art history course (Art H. 523, 524, 525 or 526); Art H. 121G and 122G (counted under general education requirements).

3. A program of 27 hours upper-division concentration must be developed from the courses listed under graphic design electives. The program is developed in consultation with the graphic design faculty.

Graphic design electives: 27 hours: Of the 27 hours, a student must select an 18-hour focus area and complete the requirements. A student can submit a plan for a focus area other than those listed below and request approval for its substitution of the requirement. The remaining 9 hours are electives.*

Focus Area I—Design—18 hours
Art G. 300, Advanced Typography, 3 hrs.
Art G. 438, Color and Design, 3 hrs.
Mkt. 300, Marketing, 3 hrs.
Comm. 324, Introduction to Advertising, 3 hrs.
Art G. 481, Cooperative Education, 3 hrs.
Elective, 3 hrs.: Art G. 493 or 339, or
Comm. 570 or 625

Focus Area II—Illustration—18 hours
Art G. 337, Advertising Illustration, 3 hrs.
Art S. 340, Life Drawing Studio, 3 hrs.
Art S. 345, Intermediate Drawing, 3 hrs.
Art G. 437, Advanced Advertising Illustration, 3 hrs.
Art G. 481, Cooperative Education, 3 hrs.
Elective, 3 hrs.: Art S. 250, 251, 252, 260,
Art G. 493 or repeats of Art G. 337 or 437

Focus Area III—Design Media—18 hours
Art G. 431D, Design Media Topics—
Darkroom Techniques, 3 hrs.
Art G. 431E, Design Media Topics—
Multi-Media, 3 hrs.
Art G. 530, Seminar in Graphic Design—
Advanced TV, 3 hrs.
Art G. 481, Cooperative Education—video or photo placement, 3 hrs.
Thea. 345, Theatre Stage Lighting, 3 hrs.
Thea. 259, Theatre Directing I, 3 hrs.

Focus Area IV—3-Dimensional Design—
18 hours
Art G. 339, Advanced Design Structure, repeat once, 6 hrs.
Art G. 300, Advanced Typography, 3 hrs.
Art G. 481, Cooperative Education—
3-D area, 3 hrs.
Art G. 438, 3 hrs.
Art G. 530, 3 hrs.

Art and Design Electives—9 hours
A grade of C or better is required in Eng. 101 and 102 and Comm. 111; 30 hours must be "G" or "Q" courses (at least 9 hours "G"); and 40 upper-division hours (numbered 300 or higher) are required for graduation.

4. Students must participate in a Junior Portfolio Review during the second semester of their junior year prior to entering the Senior Terminal Project.

5. Students must participate in the Senior Terminal Project during their final two semesters.

Model Program
Freshman
Course
Engl. 101 and 102........................................... 6
Comm. 111.................................................. 3
Math. 109, 110, 111, 112 or 211...................... 3
Art F. 110Q, Introduction to Art and Design........... 3
Art F. 136 and 137, Foundation Design I and II........ 6
Art F. 145 and 146, Foundation Drawing I and II........ 6
Art H. 124, Survey of Western Art: Modern............. 3

Sophomore
Course
Art F. 189, Foundation 3-D Design....................... 3
Art G. 233, Typography.................................. 3
Art G. 234, Layout and Production....................... 3
Art H. 121G, Survey of Western Art: Ancient............. 3
Art H. 122G, Survey of Western Art: Renaissance and Baroque 3
Art F. 240, Foundation Life Drawing..................... 3
Art G. 239, Design Structure............................ 3
General electives........................................ 9

Junior
Course
Art G. 335, Graphic Design Studio I..................... 3
Art G. 334, Graphic Design—Production.................. 3
Art G. 330, Still Photography for Graphic Design......... 3
Art G. 331, Film/Video for Graphic Design................ 3
Art and design elective.................................. 3
Graphic design electives (300-700 level).................. 6
General education........................................ 12

Senior
Course
Art G. 430, Television for Graphic Design................ 3
Art G. 435, Graphic Design Studio II................... 3
Graphic design electives (300-700)..................... 18
General education........................................ 3
Art G. 445, Senior Terminal Project..................... 3
Art H. 523, 524, 525 or 527.............................. 3

Lower-Division Courses
230. Basic Art Photography. (3). Introduces beginning photo students to basic camera operations, film and paper characteristics, darkroom procedures and a historical overview of the development of photography. Students have an opportunity to acquire skills and techniques appropriate to photographic materials emphasizing the application of fundamentals of design. For students not majoring in graphic design.

231. Basic Photography (Motion Picture). (3). Introductory course in film production. Nonmajors may be required to furnish their own cameras.


239. Design Structure. (3). Application of three-dimensional design as a form of visual communication emphasizing drawing systems, construction techniques, graphic arts processes and the manipulation of paper as a primary medium. Prerequisites: Art F. 136 and 189.

281. Cooperative Education. (1-6). Allows students to participate in the cooperative education program. Graded Cr/NCl only.

Upper-Division Courses

330. Still Photography for Graphic Design. (3). Introductory course in still photography with a design emphasis. Nonmajors may be required to furnish their own cameras. Prerequisite: Art F. 137 or instructor's consent.
331. Film/Video for Graphic Design. (3). Introductory course in film theory and video with a design emphasis. Nonmajors may be required to furnish their own cameras. Prerequisites: Art F. 137 and Art G. 350 or instructor's consent.

334. Graphic Design—Production. (3). Development of skills necessary to execute finished art for various printing processes. Prerequisites: Art G. 233, 234.

335. Graphic Design Studio I. (3). Development of skills in the generation of visual concepts and techniques for rendering color layouts in various media. Discussion of studio practice and client/vendor relationships. Repeatable for credit. Prerequisites: Art G. 233, 234 and junior standing in graphic design.

337. Advertising Illustration. (3). Development of skill in pictorial graphics and their application to the needs of advertising and product illustration emphasizing black and white media. Examines media and techniques suitable for newspaper/magazine reproduction. Repeatable for credit. Prerequisites: completion of foundation program.

339. Advanced Design Structure. (3). Advanced study of three-dimensional design concepts as applicable to visual communication. Lectures, class work and projects deal with areas of model-making, package design, signage systems and exhibition design. Repeatable for credit. Prerequisites: Art G. 330, 331 and instructor's consent.

341. Design Media Topics. (3). Advanced study of photography, cinematography or television with a design emphasis. Repeatable for credit. Prerequisites: Art G. 330, 331 or instructor's consent.

343. Graphic Design Intern. (3). On-the-job internship in an art studio or advertising agency. Instruction time divided between arranged location, observation and/or apprenticeship and weekly seminar period. Requires reports of individual research in addition to a portfolio of samples produced as an intern. Repeatable for credit. Graded Cr/NCr. Prerequisites: interview, portfolio and junior status.

345. Graphic Design Studio II. (3). A programmatic approach to problem solving. Includes concept, layout approach for various projects and skill development for producing portfolio quality work. Prerequisites: Art G. 334, 335 and senior standing in graphic design.

347. Advanced Advertising Illustration. (3). Concentration in editorial illustration emphasizing imaginative and creative problem solving. Explores a variety of color media and technique. Repeatable for credit. Prerequisite: Art G. 337.


445. Senior Terminal Project. (1-3). Supervised independent study. Students in their final two semesters must present a plan of study for and complete a design project. Project and plan of study must be approved by the graphic design faculty. Repeatable for credit. Prerequisite: senior standing in graphic design.


493. Book Design and Production. (3). A laboratory course encompassing all facets of the book including design, type composition, proofing, illustration, manufacturing, binding materials (cloths, paper and boards) distribution, copyright, royalties and remaining. Students are responsible for the development and publication of a limited edition book. Prerequisites: Art G. 334 and 337 or consent of instructor.

Courses for Graduate/Undergraduate Credit

530. Seminar in Graphic Design. (3). Supervised study and research. Requires weekly consultation and reports. Repeatable for credit. Prerequisite: departmental consent.

550. Graphic Design Workshop. (3-8). Repeatable for credit. Area covered is determined at the time the course is offered.

Studio Arts

The studio arts area offers programs in ceramics, drawing, painting, printmaking and sculpture for students who wish to specialize in the visual arts. Students wishing to minor in studio arts must complete 21 hours of art, including Art H. 121G, 122G and 15 hours of electives. Students who wish a Bachelor of Fine Arts degree in Studio Arts must complete a total of 124 hours as listed under the requirements for each discipline.

Bachelor of Arts in Studio Arts

Students select a focus area from one of the disciplines in the Studio Arts program (ceramics, drawing, painting, printmaking, sculpture). Faculty advisors work with the student in developing a study plan that best suits the skills and meets the objectives of the individual. The BBA in Studio Arts meets the minimum requirements for application to graduate study in Studio Arts at WSU and many other institutions.

Requirements. Students who wish a Bachelor of Arts degree with an emphasis in Studio Arts must complete a total of 124 hours as distributed below:

<table>
<thead>
<tr>
<th>Area</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art curriculum</td>
<td>54</td>
</tr>
<tr>
<td>Core</td>
<td>12</td>
</tr>
<tr>
<td>Foundation</td>
<td>12</td>
</tr>
<tr>
<td>Studio focus area</td>
<td>15</td>
</tr>
<tr>
<td>Art and design outside focus area</td>
<td>6</td>
</tr>
<tr>
<td>Upper division art history</td>
<td>3</td>
</tr>
<tr>
<td>Fine arts electives</td>
<td>6</td>
</tr>
<tr>
<td>Electives outside the College of Fine Arts</td>
<td>28</td>
</tr>
</tbody>
</table>

General Education Program.

Courses for Graduate/Undergraduate Credit

Sophomore

Course Hrs.

General Education 6
Art F 110Q, Foundation Visual Arts 3
Art H 121G, Survey of Western Art 3
Art F 136, Foundation Design I 3
Art F 145, Foundation Drawing I 3
Art F 189, Foundation 3-D Design 3
Art F 240, Foundation I for Drawing 3

Junior

Course Hrs.

General Education 12
Art H 122G, Survey of Western Art 3
Art H 124, Survey of Western Art 3
Studio focus area 6
Electives outside College of Fine Arts 12

Senior

Course Hrs.

General Education 12
Art history (300+) 3
Studio focus area 3
Fine arts electives 6
Electives outside College of Fine Arts 10

General

Upper-Division Course

350. Workshop. (3-5). Repeatable for credit. Area covered is determined at the time the course is offered. Prerequisite: appropriate to course offered.

Courses for Graduate/Undergraduate Credit

500. Topics in Visual Arts and Design. (3). Covers topics of special interest and significance to faculty and students in Studio Art and Design. Content varies in subject matter from one semester to another. Repeatable for credit with departmental consent.

550. Workshop. (3-5). Repeatable for credit.
Area covered is determined at the time the course is offered. Prerequisite: appropriate to course offered.

750. Art Studio Workshop. (1-3). Area covered is determined at course time offered. Repeatable for credit.

Course for Graduate Students Only

800. Seminar in Art Topics. (3). Explores areas of common interest in the arts. Supervised study, research and discussion. Repeatable for credit.

Ceramics

Through their course work, ceramics majors are exposed to their tools: building, throwing, clays and glazes. Students investigate problems of glaze formulation, firing the kiln and characteristics of clays and production.

Requirements. A total of 124 hours is required for the major as distributed below.

Area

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art curriculum</td>
<td>81</td>
</tr>
<tr>
<td>Art/design foundation</td>
<td>24</td>
</tr>
<tr>
<td>Art history (300-500 level)</td>
<td>3</td>
</tr>
<tr>
<td>Ceramics</td>
<td>24</td>
</tr>
<tr>
<td>Painting</td>
<td>3</td>
</tr>
<tr>
<td>Drawing</td>
<td>9</td>
</tr>
<tr>
<td>Printmaking</td>
<td>6</td>
</tr>
<tr>
<td>Sculpture</td>
<td>3</td>
</tr>
<tr>
<td>Art electives (300-500 level)</td>
<td>9</td>
</tr>
<tr>
<td>General education program (includes 6 hrs. art history)</td>
<td>43</td>
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</tbody>
</table>

Model Program

Freshman

Course | Hrs.
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>General education</td>
<td>18</td>
</tr>
<tr>
<td>Art F. 145, 146, 189</td>
<td>9</td>
</tr>
<tr>
<td>Art S. 270, Basic Ceramics Studio</td>
<td>3</td>
</tr>
<tr>
<td>Art S. 272, Handbuilding with Clay</td>
<td>3</td>
</tr>
</tbody>
</table>

Sophomore

Course | Hrs.
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>General education</td>
<td>12</td>
</tr>
<tr>
<td>Art S. 260, Printmaking I</td>
<td>3</td>
</tr>
<tr>
<td>Art F. 240, Foundation Life Drawing</td>
<td>3</td>
</tr>
<tr>
<td>Art S. 250 or 251, Painting</td>
<td>3</td>
</tr>
<tr>
<td>Art S. 275, Study of Ceramic Materials</td>
<td>3</td>
</tr>
<tr>
<td>Art S. 280, Sculpture</td>
<td>3</td>
</tr>
<tr>
<td>Art S. 370, Ceramics Studio</td>
<td>3</td>
</tr>
</tbody>
</table>

Junior

Course | Hrs.
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>General education</td>
<td>12</td>
</tr>
<tr>
<td>Art F. 240, Foundation Life Drawing</td>
<td>3</td>
</tr>
</tbody>
</table>

Art S. 364, Printmaking III—Lithography | 3 |
Art S. 370, Ceramics Studio | 3 |
Art S. 374, Kiln Methods | 3 |
Art S. 380, Sculpture Studio | 3 |
Art S. 570, Advanced Ceramics Studio | 3 |

Senior

Course | Hrs.
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Art history</td>
<td>6</td>
</tr>
<tr>
<td>Art S. 345, Intermediate Drawing</td>
<td>3</td>
</tr>
<tr>
<td>Art S. 570, Advanced Ceramics Studio</td>
<td>6</td>
</tr>
<tr>
<td>Art electives</td>
<td>15</td>
</tr>
</tbody>
</table>

Lower-Division Courses

270. Basic Ceramics Studio. (3). Experience in handbuilding, wheel throwing, glazing methods. Lecture periods involve general knowledge of clays, glazes, kilns and historical and contemporary pottery. Repeatable for credit.

272. Handbuilding with Clay. (3). Uses various handbuilding techniques in the context of the vessels, the figure and architecture or wall reliefs. Emphasizes the creative use of clay to make a personal statement. Explores various surface treatments and firing techniques. Emphasizes issues of content and one's ideas. Required for upper level courses. Prerequisites: Art F. 189 and Art S. 270, or departmental consent for nonmajors.

275. Study of Ceramic Materials I. (3). Lab fee. Lectures and research covering clays, glazes and refractory materials. Reading assignments concerning physical and chemical characteristics of pottery materials. Prerequisites: Art F. 189 and Art S. 270, or departmental consent for nonmajors.

Upper-Division Courses

370. Intermediate Ceramics Studio. (3). Explores students to new possibilities in throwing or handbuilding. Throwers confront problems of teapots, two foot vases and planes; handbuilders pursue a personal direction. Both have a required slip casting assignment. Emphasizes striving to make a personal statement in clay. Also an exchange of ideas to help facilitate one's personal statement. Designed to be taken twice and is repeatable for credit. Prerequisites: completion of foundation program and Art S. 270.

372. Intermediate Handbuilding. (3). Handbuilding-forming methods and drying-firing procedures relate to the various handbuilding techniques. Activities include lectures, demonstrations, and research related to historical as well as contemporary studies of clay vessels and sculptural forms. Prerequisite: Art S. 272.

374. Kiln Methods. (3). The study of kiln design and construction with research in the area of refractory materials. Includes reading assignments, notebook and laboratory research. Prerequisites: completion of foundation program and Art S. 370.

Courses for Graduate/Undergraduate Credit

570. Advanced Ceramics Studio. (3). Lab fee. Advanced studio problems involving forming methods, glaze formulation and firing procedures. Lecture periods involve advanced studies of ceramic materials and glaze formulation. Repeatable for credit. Prerequisites: Art S. 370 and instructor's consent.


574. Advanced Study of Kiln Methods. (3). Advanced study of kiln design and construction with research in the area of refractory materials. Requires reading assignments, notebook and laboratory work. Prerequisite: Art S. 374.

575. Study of Ceramic Materials II. (3). Lab fee. Lectures and research covering clays, glazes and refractory materials. Reading assignments concerning physical and chemical characteristics of pottery materials. Prerequisites: Art S. 275 and 370.

576. Study of Ceramic Glazes II. (3). Lab fee. The study of glaze formulation and the color and crystalline effects of oxides on base glazes. Requires notebook, formulation records and laboratory work. Prerequisite: Art S. 575.

578. Independent Study in Ceramics (1-3). A professional emphasis on technical or aesthetic research in the ceramics field. Available only for the advanced ceramics student with instructor's consent. Statement of intent must be submitted for faculty approval before registration. Prerequisite: departmental consent.

Courses for Graduate Students Only

800. Seminar in Art Topics. (3). Explores areas of common interest in the arts. Supervised study, research and discussion. Repeatable for credit.

870. Special Problems in Ceramics. (1-5). Research in advanced problems in ceramics. Repeatable for credit.

875. Advanced Research of Ceramic Materials. (3). Lectures and advanced research covering clays, glazes and refractory materials. Reading assignments concerning physical and chemical characteristics of pottery materials. Requires notebook and outside lab work.

876. Advanced Study of Ceramic Glazes. (3). The study of glaze formulation and the color and crystalline effects of oxides on base glazes. Requires notebook, advanced formulation records and laboratory work. Prerequisite: Art S. 875.

878-879. Terminal Project—Ceramics. (2, 3 or 5; 3 or 5).
Painting

The painting program thoroughly prepares students in painting and allows them to progress through a structured regimen which leads to the development of their own personal styles. Museums, galleries and traveling shows form the basis of environmental exposure.

Requirements. A total of 124 hours is required for the major as distributed below.

Area | Hrs
---|---
Art curriculum | 81
Art/design foundation | 24
Art history | 3
Painting | 24
Drawing | 9
Printmaking | 6
Ceramics | 3
Sculture | 3
Art electives | 9
General education program (includes 6 hrs. art history) | 43

Model Program

Freshman

Course | Hrs
---|---
General education | 10
Art F. 110Q, Foundation Visual Arts | 3
Art F. 136 and 137, Foundation Design I and II | 6
Art F. 145 and 146, Foundation Drawing I and II | 6
Art H. 124, Survey of Western Art-Modern | 3
Art S. 250, Oil Painting | 3

Sophomore

Course | Hrs
---|---
General education | 12
Art F. 240, Foundation Life Drawing | 3
Art S. 260, Printmaking I | 3
Art S. 345, Intermediate Drawing | 3
Art S. 354, Painting Studio | 6
Painting elective (Art S. 251 or 252) | 3

Junior

Course | Hrs
---|---
General education | 9
Art S. 270, Basic Ceramics Studio | 3
Art S. 280, Sculpture | 3
Art S. 340, Life Drawing Studio | 3
Art S. 354, Painting Studio | 6
Art S. 364, Printmaking III_Lithography | 3
Art elective (300+) | 3

Senior

Course | Hrs
---|---
General education | 12

Art S. 545, Advanced Drawing Studio | 3
Art S. 554, Advanced Painting Studio | 6
Art history (300+) | 3
Art elective (300+) | 6

Drawing

Drawing is the attendant discipline of the four major programs of the studio arts area—painting, printmaking, sculpture and ceramics—as well as the areas of graphic design and art education.

Upper-Division Courses

340. Life Drawing Studio. (3). Lab fee. Emphasizes individual development, figurative observation and interpretation. Repeatable for credit. Prerequisite: completion of foundation program.

345. Intermediate Drawing. (3). Drawing projects, nonfigurative. Includes problems of style, suites of related works and history of drawing techniques and materials. Repeatable once for credit. Prerequisite: completion of foundation program.

Courses for Graduate/Undergraduate Credit

545. Advanced Drawing Studio. (1-3). Drawing with a variety of media. Uses graphic problems relative to individual technical and aesthetic development. Critiques are given. Repeatable for credit. Prerequisites: Art S. 340 and 345.

549. Independent Study in Drawing. (3). A professional emphasis on technical or aesthetic research in the painting area. Available only for the advanced drawing student with instructor's consent. Statement of intent must be submitted for faculty approval before registration. Prerequisite: departmental consent.

Courses for Graduate Students Only

840. Special Problems in Life Drawing. (1 or 3). Drawing from life. Requires sketchbooks and/or portfolio. Repeatable for credit.

858-859. Terminal Project—Painting. (3 or 5; 3 or 5).

Printmaking

The printmaking program gives students a broad base of experience in printmaking. Students encounter two primary disciplines, intaglio and lithographic techniques. Supplementing these areas are relief, collagraph, serigraph and combined techniques in both black and white and color. Emphasis is placed upon creativity and students are encouraged to investigate new or traditional methods.

Requirements. A total of 124 hours is required for the major as distributed below:

Area | Hrs
---|---
Art curriculum | 81
Art/design foundation ........................................ 24
Art history electives ........................................ 3
Printmaking .................................................... 24
Drawing ........................................................ 9
Painting ........................................................ 6
Ceramics ........................................................ 3
Sculpture ........................................................ 3
Art electives ...................................................... 9
General education program (includes 6 hrs. art history) ...... 43

Model Program

Freshman
Course Hrs.
General education ............................................. 18
Art F. 145, 146, 189 .............................................. 9
Art S. 260, Printmaking I ...................................... 3
Art S. 250, Oil Painting ....................................... 3

Sophomore
Course Hrs.
General education ............................................. 12
Art F. 240, Foundation Life Drawing ...................... 3
Art S. 251, Watercolor Painting ............................ 3
Art S. 362, Printmaking II .................................... 6
Art S. 280, Sculpture .......................................... 3
Art S. 364, Printmaking III ................................... 3

Junior
Course Hrs.
General education ............................................. 13
Art F. 240, Foundation Life Drawing ...................... 3
Art S. 270, Basic Ceramics Studio ......................... 3
Art S. 340, Life Drawing Studio ............................ 3
Art S. 364, Printmaking III ................................... 3
Art S. 561, Advanced Printmaking Studio ............... 3
Art elective ....................................................... 3

Senior
Course Hrs.
Art history electives ......................................... 6
Art S. 545, Advanced Drawing Studio .................... 3
Art S. 561, Advanced Printmaking Studio ............... 6
Art electives ...................................................... 15

Lower-Division Courses

161. Printmaking for Non-Art Majors. (3). Involves basic intaglio methods, etching, aquatint, soft ground and mixed media techniques, as well as linoleum or wood block techniques, embossment and a simplified unit on papermaking.

260. Printmaking I. (3). An introduction to printmaking. Exploratory work in intaglio, collagraph, woodcut, or relief techniques and a simplified unit on papermaking.

Upper-Division Courses

362. Printmaking II. (1-3). Basic intaglio methods (etching, engraving, soft ground, aquatint and mixed techniques). Second semester includes color printing in intaglio, collagraph or mixed techniques. Repeatable for credit one semester. Prerequisite: Art S. 260

364. Printmaking III—Lithography. (3). Introduction to lithography printing from the stone in black and white. The second semester includes color printing in lithography and combined techniques. Repeatable for credit. Prerequisites: completion of foundation program and Art S. 260.

365. Basic Screenprinting and Papercrafting I. (3). Part I introduces basic screenprinting technology (stencil-block out) and resists, as well as basic photographic methods. Emphasizes multi-color printing. Second part involves basic papermaking methods (sheet forming and paper cast from a mold). Prerequisites: completion of foundation program and Art S. 260.

Courses for Graduate/Undergraduate Credit

560. Advanced Printmaking Studio—Intaglio. (1-3). Intaglio, collagraph and mixed techniques. For students interested in professional printmaking, course offers specialization in color printing or black and white. Repeatable for credit. Prerequisites: Art S. 260, 262 and 364.

561. Advanced Printmaking Studio—Lithography. (1-3). Lithography, black and white or color. For students interested in professional printmaking, course offers specialization in color printing. Repeatable for credit. Prerequisites: Art S. 364.

565. Independent Study in Printmaking. (3). A professional emphasis on technical and aesthetic research in the printmaking area. Only for the advanced printmaking student with instructor's consent. Statement of intent must be submitted for faculty approval before registration. Prerequisite: departmental consent.

Courses for Graduate Students Only

860. Special Problems in Printmaking—Intaglio. (1, 3, or 5). Advanced printmaking on an individual basis. Gives encouragement to investigation, combined with a craftsman-like approach. Techniques include all intaglio, relief and combined methods, black and white and color. Repeatable for credit.

862 & 863. Special Problems in Printmaking—Lithography. (1, 3, 5; 3 or 5). Advanced printmaking on an individual basis. Gives encouragement to investigation, combined with a craftsman-like approach. Includes lithography and allied techniques, black and white and color. Repeatable for credit.

868-869. Terminal Project—Printmaking. (3 or 5; 3 or 5).

Sculpture

The sculpture program provides students with a solid grounding in basic techniques and materials and exposes them to the past and present directions in sculpture. A professional attitude is emphasized, with traditional and experimental methods and media being explored.

Requirements. A total of 124 hours is required for the major as distributed below:

Area Hrs.
Art curriculum ..................................................... 81
Art/design foundation .......................................... 24
Art history ......................................................... 3
Sculpture .......................................................... 24
Drawing ........................................................... 9
Ceramics ............................................................ 3
Painting ............................................................. 3
Printmaking ......................................................... 6
Art electives ....................................................... 9

General education program (includes 6 hrs. art history) .... 43

Model Program

Freshman
Course Hrs.
General education ............................................. 12
Art F. 110Q, Foundation Visual Arts .......................... 3
Art S. 103, General education program (includes 6 hrs. art history) ............................ 43

Art/design foundation .......................................... 24
Art history ......................................................... 3
Sculpture .......................................................... 24
Drawing ........................................................... 9
Ceramics ............................................................ 3
Painting ............................................................. 3
Printmaking ......................................................... 6
Art electives ....................................................... 9

General education program (includes 6 hrs. art history) .... 43
Art electives (300+) ........................................................................ 6
Art history (300+) ........................................................................ 3
Sculpture elective (300+) ............................................................... 3

Lower-Division Course


Upper-Division Courses

380. Sculpture Studio. (1-3). Special emphasis on the main approaches to sculpture. Stresses the four concepts and constructive methods. Includes carving techniques in wood, stone and/or plastic; construction and assemblage techniques selected from wood, plastic, metal (welded, brazed, riveted, etc.) and/or combined materials. Repeatable once for credit. Prerequisite: completion of foundation program and Art S. 280.

381. Cast Sculpture Studio. (3). Casting techniques for bronze and aluminum sculpture. Uses plaster investment, CO2 set sand, foam vaporization and vitrified shell molds to develop individual and unique approaches to cast sculpture. Prerequisite: completion of foundation program and Art S. 280.

Courses for Graduate/Undergraduate Credit

580. Advanced Sculpture Studio. (1-3). Sculpture in any medium, emphasizing individual development and creativity. Repeatable for credit. Prerequisite: Art S. 380.

585. Independent Study in Sculpture. (3). A professional emphasis on technical or aesthetic research in the sculpture area. Available only for the advanced sculpture student with instructor's consent. Statement of intent must be submitted for faculty approval before registration. Prerequisite: departmental consent.

Courses for Graduate Students Only

880. Special Problems in Sculpture. (3 or 5). Advanced sculpture emphasizing experimentation and high quality work on an individual basis. Stresses special projects in casting architectural sculpture, mixed media or new materials and techniques. Repeatable for credit.

888-889. Terminal Project—Sculpture. (3 or 5; 3 or 5).

School of Music

The School of Music, which includes programs areas of music education, musicology/composition, keyboard, strings, voice and winds/percussion, offers courses and curricula designed to train and educate students who are planning careers in music. In addition, the school's offerings allow students to gain an understanding of music as a humanistic study. Recitals by students, faculty and guests are augmented by the overall community programs in the fine arts.

Students in the School of Music enjoy the use of extensive facilities in the Duerksen Fine Arts Center and Wiedemann Hall; these include the Lewis and Selma Miller Concert Hall and the recital/concert auditorium in Wiedemann Hall, which was constructed in 1986 to house the first Marcusser organ in North America.

Policies

Proficiency Examinations

Students eligible for University enrollment may enter a music degree program. However, majors in music must demonstrate their performance ability on a minimum of one instrument or in voice. After their initial registration, students have their proficiency judged by their major professor; thereafter, they must perform for a faculty jury each semester to determine their proficiency level and progress. Semester proficiency cards, on which progress is recorded, are maintained for each student.

All music majors must pass a piano proficiency examination. Entering students majoring in music whose background indicates that they are competent in piano may pass the requirement by special examination. Students who have not satisfied all piano proficiency requirements must enroll in class piano until they meet those requirements. Transfer students who submit proof of the completion of a comparable piano proficiency examination by official transcript or letter from their former institution are exempted from this requirement.

All proficiency examinations must be passed before a student is allowed to student teach.

Applied Music

Individual instruction is given in instruments and voice to develop musicianship, performance skills and reading knowledge of music literature. Specific requirements for each level are set by the individual applied areas.

Applied students other than music majors must enroll in the appropriate nonmajor category (see Schedule of Courses). This will provide a 30-minute lesson per week.

One-credit hour enrollments are provided to music majors studying secondary instruments. These receive a 30-minute lesson each week and require a minimum of five hours of practice per week.

Two-credit hour enrollments are provided to majors and special music students. These receive either (1) a 30-minute private lesson (minimum) each week and a one-hour master class each week or (2) a one-hour lesson per week or other equivalent arrangements at the option of the instructor. Students are required to practice a minimum of ten hours each week.

Four-credit hour enrollments are provided to performance majors (juniors and above) and special music students. These receive two 30-minute lessons each week (minimum) and a one-hour master class each week or other equivalent arrangements at the option of the instructor. Students are required to practice a minimum of 20 hours per week.

Students receive academic credit for applied music instruction only when they are taught on the University campus by approved music faculty. Students wishing to drop an applied lesson registration must inform the instructor in person and secure his/her signature on the drop form before approval may be given by the college office.

Applied music students may enroll in the following classifications: freshmen and sophomores, Mus. A. 112 (nonmajors), 231 and 232; juniors and seniors, Mus. A. 112 (nonmajors), 431, 432 and 434*; and graduate students, Mus. A. 712 (nonmajors), 731, 732 and 734*. These applied music courses are repeatable for credit.

Prior to graduation all music majors must achieve an acceptable level of performance proficiency, which is determined by the faculty according to each student’s degree program. In addition, students may be required to pass an examination on materials in their chief performing medium.

*Performance majors or designated students only may enroll in 434 or 734.

Recitals

All music majors are required to enroll in four semesters of Mus. P. 050, Recital, and attend a minimum of 14 specified recitals and concerts sponsored by the School of Music each of the semesters. For majors other than BA, performance of the senior recital fulfills a fifth semester recital requirement; they must be enrolled in Recital (Mus. P. 050 for BME and BM theory-composition majors or Mus. P. 400 for BM performance, pedagogy and accompanying majors) during that semester. Senior recital is not required for
the BA in music.

All music majors are required to declare a chief performance medium. BM and BME majors are required to present a public or jury recital prior to graduation. The decision as to whether the performance will be jury or public is made by an examining committee. Students present to the examining committee a projected senior recital program and the examining committee determines: (1) the suitability of the projected program, (2) the capability of the student to perform the program publicly, or (3) the advisability of performing the senior recital before a faculty jury in lieu of a public recital.

Further recital specifications are found under graduation requirements for Bachelor of Music in Theory-Composition.

No music major may prepare or perform the senior recital without the guidance of a School of Music faculty member. In the event the required applied music credit hours have been earned prior to the recital presentation, music majors must continue to enroll (2 credit hour minimum) in their major instrument through the preparation for and the performance of the recital. The required number of credit hours must be earned in applied instruction even though there may be credits to complete after the senior recital has been performed.

Graduation Requirements

Bachelor of Music Requirements

Students receiving the BM choose either a performing medium (piano, organ, voice, strings, wind or percussion) or theory-composition as their major area of concentration.

The general graduation requirements of the University must be met as described in the Catalog under Academic Information—Requirements for Graduation. In addition, certain music requirements must be met for the different degree emphases in the School of Music.

### Bachelor of Music in Theory-Composition

<table>
<thead>
<tr>
<th>Area</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applied Music</td>
<td>20</td>
</tr>
<tr>
<td>Chief performing medium (piano, organ)</td>
<td>16</td>
</tr>
<tr>
<td>Other performing media</td>
<td>4</td>
</tr>
<tr>
<td>or Chief performing medium (nonkeyboard)</td>
<td>8</td>
</tr>
<tr>
<td>Keyboard performing medium</td>
<td>8</td>
</tr>
</tbody>
</table>

Other performing media | 4 |
Theory and Composition | 40 |
Mus. C. 127Q-129, 128-130, 227-229, 228-230, 295-260, 523, 559, 560, 561, 641, 659, 660, 661, 671 and 672 |
History and Literature of Music | 12 |
Mus. C. 113Q, 334Q and 335Q and three hours of upper-division electives in music history or literature |
Conducting | 4 |
Mus. P. 217 or 218, 651 or 659 |
Ensembles* | 10 |
Electives (music or nonmusic courses) | 7 |
Recital attendance (four semesters plus senior recital) | 1 |

Theory-composition majors are required to present for public performance a selection of their compositions representing large and small forms, totaling a minimum of 20 minutes. Students must submit completed scores representing a majority of the program to an examining committee the semester prior to that of the proposed recital; the examining committee shall determine the acceptability of the program. The composition or compositions must be submitted in a minimum of two ink copies. These ink copies must represent a high quality of manuscript technique and must be completed in the candidate's own hand. In addition, students may elect to present a recital in their chief performing medium with the permission of their applied music instructor and achievement of junior proficiency in that instrument.

Bachelor of Music in Performance—Instrumental Emphasis

<table>
<thead>
<tr>
<th>Area</th>
<th>Hrs.</th>
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</thead>
<tbody>
<tr>
<td>Applied Music</td>
<td>28</td>
</tr>
<tr>
<td>Chief performing medium</td>
<td>24</td>
</tr>
<tr>
<td>Second performing medium (four semesters)</td>
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</tr>
<tr>
<td>Theory</td>
<td>22</td>
</tr>
<tr>
<td>Mus. C. 127Q-129, 128-130, 227-229, 228-230, 523, 561 or 661 and 641, 645, 647 or 435</td>
<td></td>
</tr>
<tr>
<td>History and Literature of Music</td>
<td>12</td>
</tr>
<tr>
<td>Must include Mus. C. 113Q, 334Q and 335Q</td>
<td></td>
</tr>
<tr>
<td>Conducting</td>
<td>4</td>
</tr>
<tr>
<td>Mus. P. 217 or 218 and 651 or 691</td>
<td></td>
</tr>
<tr>
<td>Ensembles*</td>
<td>10</td>
</tr>
<tr>
<td>Electives</td>
<td>14</td>
</tr>
<tr>
<td>Pedagogy (Mus. P. 620 for violin/viola; Mus. P. 680 for woodwind; Mus. P. 681 for brass; Mus. P. 682 for percussion; Mus. P. 790 for all other instrumental BM majors)</td>
<td>2</td>
</tr>
</tbody>
</table>

Senior Recital (Mus. P. 400) | 1 |
Recital attendance (specified number of recitals per semester for four semesters, Mus. P. 050) | 1 |

*See degree checklists for specified ensembles.

Bachelor of Music in Performance—Keyboard Emphasis

<table>
<thead>
<tr>
<th>Area</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Programs</td>
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</tr>
<tr>
<td>Applied Music</td>
<td></td>
</tr>
<tr>
<td>Chief performing medium (see specific major below)</td>
<td></td>
</tr>
<tr>
<td>Second performing medium</td>
<td>4</td>
</tr>
<tr>
<td>Theory</td>
<td>22</td>
</tr>
<tr>
<td>Mus. C. 127Q-129, 128-130, 227-229, 228-230, 523, 561 or 661, 345 or 641</td>
<td></td>
</tr>
<tr>
<td>History and Literature of Music</td>
<td>9</td>
</tr>
<tr>
<td>Mus. C. 113Q, 334Q and 335Q</td>
<td></td>
</tr>
<tr>
<td>Conducting</td>
<td>4</td>
</tr>
<tr>
<td>Mus. P. 217 or 218 and 651 or 691</td>
<td></td>
</tr>
<tr>
<td>Ensembles (see specific major below)</td>
<td></td>
</tr>
<tr>
<td>Recital Attendance</td>
<td></td>
</tr>
<tr>
<td>Mus. P. 050 (enrollment for four semesters in a specified number of recitals)</td>
<td></td>
</tr>
</tbody>
</table>

Specific Keyboard Program Requirements

Piano Performance Emphasis

<table>
<thead>
<tr>
<th>Area</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applied Piano</td>
<td>24</td>
</tr>
<tr>
<td>Mus. P. 250 and 251, Applied Concerto</td>
<td>4</td>
</tr>
<tr>
<td>Mus. P. 107-407, Piano Repertoire</td>
<td>6</td>
</tr>
<tr>
<td>Mus. P. 580, Piano Pedagogy</td>
<td>2</td>
</tr>
<tr>
<td>Mus. C. 782 and 783, Piano Literature</td>
<td>4</td>
</tr>
<tr>
<td>Ensembles (four semesters of accompanying required for all Bachelor of Music piano majors and 4 hours of appropriate ensemble. Keyboard scholarship recipients are required to enroll in accompanying each semester they hold a scholarship.)</td>
<td></td>
</tr>
<tr>
<td>Mus. P. 300, Junior Recital (piano)</td>
<td>1</td>
</tr>
<tr>
<td>Mus. P. 400 Senior Recital (piano)</td>
<td>1</td>
</tr>
<tr>
<td>Electives</td>
<td>2</td>
</tr>
<tr>
<td>Piano Accompanying Emphasis</td>
<td></td>
</tr>
<tr>
<td>Applied Piano</td>
<td>16</td>
</tr>
<tr>
<td>Mus. P. 223, 224, 423 and 424, Applied Piano Accompanying</td>
<td>12</td>
</tr>
<tr>
<td>Mus. P. 121, 122, 221, 222, Ital., Eng., Fren., Germ. Diction</td>
<td>4</td>
</tr>
<tr>
<td>Mus. P. 107-407, Piano Repertoire</td>
<td>4</td>
</tr>
<tr>
<td>Mus. P. 580, Piano Pedagogy</td>
<td>2</td>
</tr>
<tr>
<td>Mus. C. 726, Voice Literature</td>
<td>3</td>
</tr>
<tr>
<td>Mus. C. 685, String Literature</td>
<td>2</td>
</tr>
<tr>
<td>Ensembles</td>
<td>8</td>
</tr>
</tbody>
</table>
(four semesters of accompanying required for all Bachelor of Music piano majors and 4 hours of appropriate ensemble. Keyboard scholarship recipients are required to enroll in accompanying each semester they hold a scholarship.)
Mus. P. 300, Junior Recital (piano) ........ 1
Mus. P. 450 and 451, Senior Accompanying Recital ........................................ 2
Piano Pedagogy Emphasis
Applied Piano ........................................ 4
Mus. P. 107-107, Piano Repertoire ......... 6
Mus. P. 580, Piano Pedagogy .................. 2
Mus. P. 581, Piano Teaching Materials ... 2
Mus. C. 782 and 783, Piano Literature ............................................ 4
Mus. P. 790, Special Topics (designated) 4
Ensembles .............................................. 8
(four semesters of accompanying required for all Bachelor of Music piano majors and 4 hours of appropriate ensemble. Keyboard scholarship recipients are required to enroll in accompanying each semester they hold a scholarship.)
Mus. P. 400, Senior Recital (organ) ........ 1
Electives .................................................. 15

Bachelor of Music in Performance — Vocal Emphasis
Area Hrs.
Applied Music ........................................ 26
Voice ................................................. 24
Piano (two semesters) ......................... 2
Study in another instrument may be substituted if student meets piano proficiency requirement
Theory ................................................. 18
Mus. C. 12Q-129, 128-130, 227-229, 228-230 and 523 or 661
History and Literature of Music .............. 9
Mus. C. 113Q, 334Q and 335Q
Conducting ........................................... 2
Mus. P. 218
Voice Pedagogy and Repertoire ............... 9
Mus. P. 121, 122, 221, 222, 625 and Mus. C. 726

Bachelor of Music with Elective Studies in Business
Area Hrs.
Applied Music ........................................ 20
Chief performing medium ..................... 16
Second performing medium (four semesters) 4
Theory ................................................. 20
Mus. C. 127Q-129, 128-130, 227-229, 228-230, 561 or 661, 641 or 753 or 345
History and Literature of Music .............. 9
Mus. C. 113Q, 334Q and 335Q
Conducting ........................................... 4
Mus. P. 217 or 218 and 651 or 691
Ensembles (see degree sheets for specified ensembles) 8 or 10
Electives .................................................. 8-10
Vocal majors require Mus. P. 121, 221, 222. Piano majors require Mus. P. 580
Senior Recital (Mus. P. 400) ..................... 1
Reital attendance (specified number of recitals per semester for four semesters, Mus. P. 050)
Foreign languages (5 hours in each language or 10 hours in one of two languages) .......... 10
Fren. 111-112, Germ. 111-112

Bachelor of Music with Elective Studies in Journalism (News Editorial Emphasis)
Area Hrs.
Applied Music ........................................ 20
Chief performing medium ..................... 16
Second performing medium (four semesters) 4
Theory ................................................. 20
Mus. C. 127Q-129, 128-130, 227-229, 228-230, 561 or 661, 641 or 753 or 345
History and Literature of Music .............. 9
Mus. C. 113Q, 334Q and 335Q
Conducting ........................................... 4
Mus. P. 217 or 218 and 651 or 691
Ensembles (see degree sheets for specified ensembles) 8 or 10
Electives .................................................. 8-10
Vocal majors require Mus. P. 121, 221, 222. Piano majors require Mus. P. 580
Senior Recital (Mus. P. 400) ..................... 1
Reital attendance (specified number of recitals per semester for four semesters, Mus. P. 050)

Bachelor of Music with Elective Studies in Journalism (Advertising/Public Relations Emphasis)
Area Hrs.
Applied Music ........................................ 20
Chief performing medium ..................... 16
Second performing medium (four semesters) 4
Theory ................................................. 20
Mus. C. 127Q-129, 128-130, 227-229, 228-230, 561 or 661, 641 or 753 or 345
History and Literature of Music .............. 9
Mus. C. 113Q, 334Q and 335Q
Conducting ........................................... 4
Mus. P. 217 or 218 and 651 or 691
Ensembles (see degree sheets for specified ensembles) 8 or 10
Electives .................................................. 8-10
Vocal majors require Mus. P. 121, 221, 222. Piano majors require Mus. P. 580
Senior Recital (Mus. P. 400) ..................... 1
Reital attendance (specified number of recitals per semester for four semesters, Mus. P. 050)

Bachelor of Music with Elective Studies in Theatre
Area Hrs.
Applied Music ........................................ 20
Chief performing medium ..................... 16
Second performing medium (four semesters) 4
Theory ................................................. 20
Mus. C. 127Q-129, 128-130, 227-229, 228-230, 561 or 661, 641 or 753 or 345
History and Literature of Music .............. 9
Mus. C. 113Q, 334Q and 335Q
Conducting ........................................... 4
Mus. P. 217 or 218 and 651 or 691
Ensembles (see degree sheets for specified ensembles) 8 or 10
Electives .................................................. 8-10
Vocal majors require Mus. P. 121, 221, 222. Piano majors require Mus. P. 580
Senior Recital (Mus. P. 400) ..................... 1
Reital attendance (specified number of recitals per semester for four semesters, Mus. P. 050)
Bachelor of Music with Elective Studies in Journalism (Broadcasting Emphasis)

<table>
<thead>
<tr>
<th>Area</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applied Music</td>
<td>20</td>
</tr>
<tr>
<td>Chief performing medium</td>
<td>16</td>
</tr>
<tr>
<td>Second performing medium</td>
<td></td>
</tr>
<tr>
<td>(four semesters)</td>
<td>4</td>
</tr>
<tr>
<td>Theory</td>
<td>20</td>
</tr>
<tr>
<td>Mus. C 127Q-129, 128-130, 227-229, 228-230, 561 or 661, 641, 645, 643 or 345</td>
<td></td>
</tr>
<tr>
<td>History and Literature of Music</td>
<td>9</td>
</tr>
<tr>
<td>Mus. C 113Q, 334Q and 335Q</td>
<td></td>
</tr>
<tr>
<td>Conducting</td>
<td>4</td>
</tr>
<tr>
<td>Mus. P 217 or 218 and 651 or 691 Ensembles (see degree sheets for specified ensembles)</td>
<td>8 or 10</td>
</tr>
<tr>
<td>Electives</td>
<td>6-8</td>
</tr>
</tbody>
</table>


Senior Recital (Mus. P 400) 1 Recital attendance (specified number of recitals per semester for four semesters, Mus. P 050)

Journalism Requirements 21 Comm. 130 (3), 230 (3); 300 (3); 322 (3); 332 (3); 630 (3); 690 (3).

Bachelor of Music Education Requirements

Students receiving the BME must meet the state requirements for the secondary three-year certificate and three-year elementary certificate. Students may select from four options within this degree:

1. Instrumental emphasis offered to satisfy the needs of students whose chief performing medium is instrumental or keyboard and who plan to enter the field of instrumental music teaching in the public schools.

2. Vocal emphasis offered to satisfy the needs of students whose chief performing medium is voice, piano or guitar and who plan to enter the field of vocal and general music teaching in the public schools.

3. Special music education emphasis offered to satisfy the needs of students, either vocal or instrumental specialists, who plan to enter the field of music education for special education children in the public schools.

4. Piano pedagogy emphasis offered to satisfy the needs of students whose chief performing medium is piano and who plan to enter the field of vocal, piano or general music teaching in the public schools and studio piano teaching in the community.

Student Teaching

Admission into the student teaching semester requires a minimum cumulative grade point average of 2.500; a minimum grade point average of 2.500 in music courses; senior standing (90 hours—200 credit points); a grade of C or better in English composition (Engl. 101 or its equivalent and Engl. 102); a grade of C or better in Comm. 111; a grade of C or better in College Algebra; completion of prerequisites in educational psychology, foundations of education and music education methods; successful completion of the piano proficiency exam; successful completion of a physical examination; and a recommendation by the music education area.

Transfer students must satisfy education requirements for prerequisites not taken at Wichita State.

All students must have an application on file with the music education area and receive its approval. Students must file applications with the Director of Music Education.

Graduation Requirements

The following program fulfills both the University requirements for graduation and the Kansas certification requirement and must be taken by all Bachelor of Music Education candidates. In completing the BME program, the student must meet the general education program requirements of the University given in the Academic Information—Requirements for Graduation section of the Catalog.

General Education Requirements

<table>
<thead>
<tr>
<th>Area</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic Skills</td>
<td>12</td>
</tr>
<tr>
<td>Engl. 101 and 102</td>
<td>6</td>
</tr>
<tr>
<td>Comm. 111</td>
<td>3</td>
</tr>
<tr>
<td>Math. 109, 111, 112 or 211</td>
<td>3</td>
</tr>
<tr>
<td>Humanities and Fine Arts</td>
<td>9</td>
</tr>
<tr>
<td>Literature required, 3 hrs.; Mus. C 113Q required, 3 hrs.</td>
<td>3</td>
</tr>
<tr>
<td>Electric bass required</td>
<td>4</td>
</tr>
</tbody>
</table>

Required for all of the above majors: Mus. E 341, 1 hr., and 342, 1 hr.

Students must be enrolled in applied music during the semester of their senior recital.

General Music 24-26 Mus. C 127Q-129, 128-130, 227-229, 228-230, 561 or 753 or 754, Mus. P 217 or 218, 651 or 691.

Recital attendance (four semesters plus senior recital, Mus. P. 050).

Music Education ........................................ 16
Mus. E. 204, 304, 404* and 611 10
Mus. E. 235, 236, 237, 238, 239, 240 and 241 6

Additional Courses Required for Vocal (Keyboard) Emphasis

**Area** | **Hrs.**
---|---
Applied Music ........................................... 16
Vocal majors (voice)...................... 14
(piano) .................................................. 2
Keyboard majors (piano) .................. 14
(Mus. E. 341, 342) .................................. 2

Students must be enrolled in applied music during the semester of their senior recital.

General Music ........................................... 28
Mus. C. 127Q-129, 128-130, 227-229, 228-230, 561 or 661, 641 or 753 or 754, Mus. P. 217 or 218, 651 or 691, and Mus. E. 342; 3 hrs. of music electives for vocal majors; for piano majors, Mus. P. 580 or 581, 307 and 407 required.

Ensembles.................................................. 7 or 9
Vocal majors................................. 9
Instrumental and piano majors........... 7
(see degree sheets for specified ensembles)

Recital attendance (four semesters plus senior recital, Mus. P. 050).

Education Requirements

**Area** | **Hrs.**
---|---
Vocal Emphasis-Mus. E. 203, 303, 304, 309, 403, 241, 242 12-16
Instrumental Emphasis-Mus. E. 204, 304, 309, 404, 243, 236, 237, 238, 239, 240, 461

Additional courses for piano pedagogy majors-Mus. P. 580 (2 hours) and 790 (4 hours).

**Bachelor of Arts in Music**

Students who wish a Bachelor of Arts in music are required to complete courses in Fairmount College of Liberal Arts and the College of Fine Arts as indicated in the musicdegree checksheets and to elect 50 music hours as specified in the following areas and course listings.

**Area** | **Hrs.**
---|---
Group I | Music Literature and History ............... 9
Mus. C. 113Q and six hours in additional music literature courses such as Mus. C. 334Q-335Q, 346Q, 624, 726, 753-754. May not use courses counted in General Education requirement.

**Group II**

Music Theory ........................................ 20
Mus. C. 127Q-129, 128-130, 227-229, 228, 523, 561 or 661, 641

**Group III**

Conducting ........................................... 2
Mus. P. 217 or 218

**Group IV**

Applied Music ........................................ 6
Voice, piano, organ, guitar or orchestral instrument

**Group V**

Ensembles ............................................ 4
Select in consultation with adviser

**Music Minor**

A minor in music is available to any student whose major field or area of emphasis is outside the School of Music. A music minor consists of 20 hours as indicated: Mus C 113Q, 127Q, 128, 130, and 9 additional hours selected from among the following: Mus C 160C, 227, 228, 229, 230, 334Q, 335Q, 523, music applied (4 hour maximum), and music ensembles (4 hour maximum).

**Music Education**

**Lower-Division Courses**

156. Music Education Workshop. (1-4). Repeatable for credit.

203. Fundamentals of Vocal Music for Secondary Schools. (3). The teaching of music in the secondary school, consideration of objectives and examination of materials. Designed for students primarily interested in teaching music in secondary schools; includes observation in public schools. Includes classroom guitar. Prerequisite: music education major or instructor's consent. Grades 6-12.

204. Fundamentals of Instrumental Music for Secondary Schools. (3). Techniques and materials for teaching instrumental music in junior and senior high schools. Emphasizes instrumental organization and administration, pedagogical practices, laboratory experiences, guiding student behavior, evaluation and professional responsibilities. For students primarily interested in teaching instrumental music in the secondary schools. Includes teaching techniques for jazz ensemble. Prerequisite: music education major or instructor's consent. Grades 7-12.

235. Methods of Teaching Orchestral Instruments (Violin and Viola). (1). Procedures and materials for class and private teaching. Includes performance and fundamentals in first position and theory and reading knowledge of positions two through five. Includes band and orchestra laboratory. Grades 4-12.

236. Methods of Teaching Orchestral Instruments (Cello and String Bass). (1). Procedures and materials for class and private teaching. Applies fundamental techniques. Includes knowledge of more difficult positions and special techniques. Includes band and orchestra laboratory. Grades 4-12.

237. Methods of Teaching Band and Orchestral Instruments (Clarinet and Saxophone).
(1) Prepares the prospective instrumental music instructor to effectively teach clarinet and saxophone in the public school setting. Includes discussions of teaching techniques, identification of problems peculiar to each instrument, care and minor repair, instructional materials, reed selection and adjustment, instrument brands and the development of sufficient playing skills. Grades 4-12.

288. Methods of Teaching Band and Orchestral Instruments (Flute and Double Reeds). (1). Prepares the prospective instrumental music instructor to effectively teach flute and double reeds in the public school setting. Includes discussions of teaching techniques, identification of problems peculiar to each instrument, care of instrument, instructional materials, instrument brands and the development of sufficient playing skills. Grades 4-12.


309. Survey of Music for Special Education. (3). Consideration of problems and methods in preparation for student teaching of music with special education students at early childhood, elementary, and secondary levels in public schools. Includes musical settings (self-contained and mainstreamed) in regular and alternative schools and classes. Includes development of student's music ability in the development of sufficient playing skills. Grades 4-12.


281. Cooperative Education. (1-8). A field observation program of instruction designed to complement and enhance the student's academic program. Individualized programs must be formulated in consultation with and approved by appropriate faculty sponsors and cooperative education coordinators. Students may follow one of two scheduling patterns: parallel, enrolling concurrently in a minimum of six hours of course work in addition to their co-op assignment; alternating, working full time one semester in a field study and returning to full school enrollment the following semester; such students need not be concurrently enrolled in any other course. Prerequisite: successful completion of the freshman year and satisfactory academic standing prior to the first job assignment. May be repeated for credit. Offered Cr/NC only.

Upper-Division Courses


401. Cooperative Education. (1-8). A field placement which integrates course work with teaching in instrumental music programs at all levels. Prerequisites: Mus E. 204 and 304. To be taken during student teaching semester. Grades 4-12.

681. Music Methods for Early Childhood Education. (3). Methods and materials for teaching music in the preschool and kindergarten classroom. Includes the development of the child's musical growth through singing, listening, rhythmic and creative activities; a survey of available materials and development of play activities and conducting skills.

732. Music in the Junior High School. (3). Consideration of materials and methods for teaching music in the junior high school. Includes application of snare drum fundamentals and a study of basic techniques for all percussion instruments. Grades 4-12.

341. Survey of Singing Techniques and Literature. (1). Vocal problems and strategies and the development of sufficient vocal skill to assure effective use of the voice in demonstrating vocal technique. Experience in using the singing voice as a teaching tool. Includes a survey of literature for the solo voice. Required for instrumental, keyboard and special music education majors. Grades K-12.

351. Music Fundamentals for the Classroom Teacher. (2). For students planning to teach in the elementary school classroom. Includes basic fundamentals of music emphasizing development of student's music ability in singing, playing the piano, and classroom instruments.

354B. Music Fundamentals for the Classroom Teacher. (2). For students planning to teach in the elementary school classroom. Includes basic fundamentals of music emphasizing development of student's music ability in singing, playing the piano, and classroom instruments.

403. Advanced Techniques of Vocal/General School Music. (1). Emphasizes special problems related to preparation for student teaching: consideration of the vocal and general music programs at all levels. Prerequisites: Mus. E. 203 and 303 (also 309 for special music education majors). To be taken during student teaching semester. Grades K-12.

404A. Advanced Techniques of Instrumental School Music. (1). Consideration of special problems related to preparation for student teaching in instrumental music programs at all levels. Prerequisites: Mus E. 204 and 304. To be taken during student teaching semester. Grades 4-12.

81. Cooperative Education. (1-8). A field placement which integrates course work with teaching in instrumental music programs at all levels. Prerequisites: Mus E. 204 and 304. To be taken during student teaching semester. Grades 4-12.

686. Marching Band Techniques. (2). A systematic approach to the marching band with regard to organization, show development, instrumentation, music adaptation, drill construction and script development. Teaches both traditional drill and corps style marching utilizing manual methods and computer generated graphics. Field observations, films, photographs and live performances by marching bands complement the class syllabus. Required for all instrumental majors.

732. Music in the Junior High School. (3). Includes administrative structures, the curriculum, adolescent development, teaching as behavior and competencies needed for successful teaching of general and choral music in grades 6-9.

737A. Advanced Woodwind Techniques. (2). Special problems and techniques in the teaching of woodwind instruments. Surveys current materials. Prerequisites: Mus. E. 237 and 238 or equivalent.

739A. Advanced Brass Techniques. (2). Special problems and techniques in the teaching of brass instruments. Surveys current materials. Prerequisite: Mus. E. 229 or equivalent.

740A. Advanced Percussion Techniques. (2). Special problems and techniques in the teaching of percussion instruments. Surveys current materials. Prerequisite: Mus. E. 240 or equivalent.

750. Music Education Workshop. (1-4). Repeatable for credit.

781. Cooperative Education. (1-8). A field placement which integrates course work with teaching in instrumental music programs at all levels. Prerequisites: Mus E. 204 and 304. To be taken during student teaching semester. Grades 4-12.
a planned and supervised professional experience designed to complement and enhance the student's academic program. Individualized programs must be formulated in consultation with and approved by appropriate faculty sponsors and cooperative education coordinators. Students enrolled in Coop 781 may follow one of two scheduling patterns: parallel, enrolling concurrently in a minimum of six hours of course work in addition to their co-op assignment; alternating, working full time one semester in a field study and returning to full school enrollment the following semester; such students need not be concurrently enrolled in any other course. Prerequisites: successful completion of the freshman year and satisfactory academic standing prior to the first job assignment. May be repeated for credit. Offered Cr/NCr only.


790. Special Topics in Music. (1-4). For individual or group instruction. Individual study enrollment requires departmental consent. Repeatable with departmental consent.

Courses for Graduate Students Only


822. Advanced Techniques in Special Music Education. (3). For the music education special emphasis MME candidates only. Studies research, literature and trends in special music education. Includes an evaluation of materials and techniques and special projects exploring the development of musical understanding in the dysfunctioning child. Course satisfies the requirement, effective September 1, 1981, that applicants for initial certification or renewal of secondary and/or elementary certification shall present a survey course, or equivalent content from other courses, in the subject area of exceptional children. This provision applies to initial certification and recertification of music teachers only. Prerequisite: Mus. E. 403 or 404.

823. Special Music Education Practicum. (3). For the music special education emphasis MME candidate only. Supervised teaching in special education classrooms. A companion course to MUS. E. 822; gives the music special education emphasis MME candidate experience in teaching in special education classrooms. Prerequisite: Mus. E. 822 or concurrent enrollment.

831. Developing the Child's Musical Understanding. (3). Definition of understanding necessary for attainment of musical awareness in the child. Directs the exploration of classroom experiences toward the successful development of understanding through the application of basic learning principles. Prerequisite: Mus E. 403.


841. Special Project in Music. (1-3). Individually supervised study or research emphasizing the student's personal needs. Repeatable for credit. Prerequisite: instructor's consent.

842. Special Project in Music. (1-3). Individually supervised study or research emphasizing the personal needs of the student. Repeatable for credit. Prerequisite: instructor's consent.

844. Terminal Conducting Project. (2). Individually supervised project for those electing the conducting option on the instrumental or choral emphasis under the MME degree. Prerequisite: instructor and departmental consent.


851. Psychology of Music. (3). An overview of music behaviors from a psychological perspective. Relates recent literature concerning human psychoacoustics; melodic, rhythmic and harmonic perception; and major learning theories to current trends in music education.

852. Introduction to Bibliography and Research. (3). See course listing under musicology-composition department.

854. Research Seminar in Music Education. (3). Continued application of techniques of research. Requires the completion of a major research project. Prerequisite: Mus. C. 852.

871. History and Philosophy of Music Education. (2). A study of historical trends and contemporary philosophies relevant to music education. Prerequisite: Mus. E. 851.


876. Thesis. (2).

Music Performance

Applied Music

Private Study

112. Applied Music Instruction for Nonmajors. (2). Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable.

231. (1). For majors only; study on secondary instruments. Basic instruction. Repeatable for credit. Lower division.

232. (2). For majors only. Repeatable for credit. Lower division.

431. (1). For majors only; study on secondary instruments. Basic instruction. Repeatable for credit. Upper division.

432. (2). For majors only. Repeatable for credit. Upper division.

434. (4). For performance, pedagogy and accompanying majors only. Repeatable for credit. Upper division.

712. Applied Music Instruction for Nonmajors. (2). Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable for credit.

731. (1). For majors only; study on secondary instruments. Basic instruction. Repeatable for credit. Graduate.

732. (2). For majors only. Repeatable for credit. Graduate.

734. (4). For performance and pedagogy majors or students preparing for master's degree recitals only. Repeatable for credit. Graduate.

Applied Music Abbreviations

A Bassoon  P Piano
B Cello  R String Bass
C Clarinet  S Trombone
D Euphonium  T Trumpet
E Flute  U Tuba
F French Horn  V Viola
G Guitar  W Violin
H Harp  X Saxophone
J Lute  Y Voice
K Oboe  M Organ
L Piano  N Percussion
M Percussion

Applied Music Classes

113P. Piano Class. Level 1. (1). Non-piano music majors. Class piano prepares the student to pass the piano proficiency exam. Required of all music majors. Repeatable for credit. Prerequisite: class placement interview.

114P. Piano Class. Level 2. (1). Non-piano music majors. Repeatable for credit. Prerequisite: class placement interview.

115P. Piano Class. Level 3. (3). Non-piano music majors. Repeatable for credit. Prerequisite: class placement interview.

116P. Piano Class. Level 4. (1). Non-piano music majors. Repeatable for credit. Prerequisite: class placement interview.

117G. Guitar Class. (2). Beginners. Repeatable.

117P. Piano Class. (1). Non-piano music majors. Prerequisite: class placement interview.

117W. Violin Class for Adult Beginners. (2). Beginning violin class: violin fundamentals, emphasizing tone and intonation development; basic techniques for reading (notes and rhythm). May not be applied to music major requirements. Repeatable for credit.

117Y. Popular Vocal Styles. (2). Class voice instruction for adults emphasizing basic vocal technique and how it can be applied for use in popular styles of singing, including vocal jazz, pop, musical theatre, etc. Gives students an opportunity to explore techniques for developing their own voices and to practice singing live...
a supportive environment, and includes information via lecture, demonstration, listening to recordings related to stylistic differences in the popular idiom. Intended for nonmusic majors and will not be applicable to music degree requirements. Repeatable.

118J. Guitar Class. (2). Intermediate. Repeatable.

118P. Piano Class. (1). Non-piano music majors. Prerequisite: class placement interview. Repeatable.

119F. Piano Class. (1). Piano majors. Prerequisite: class placement interview. Repeatable.

120P. Piano Class. (2). Nonmajors. Repeatable.

717W. Violin Class for Adult Beginners. (2). Beginning violin class: violin fundamentals, emphasizing tone and intonation development; basic techniques for reading (notes and rhythms). May not be applied to music major requirements. Repeatable for credit.

717Y. Popular Vocal Styles. (2). Class voice instruction for adults emphasizing basic vocal technique and how it can be applied for use in popular styles of singing, including vocal jazz, pop, music theatre, etc. Gives students an opportunity to explore techniques for developing their own voices and to practice singing in a supportive environment; includes information via lecture, demonstration, listening to recordings related to stylistic differences in the popular idiom. Intended for nonmusic majors; not applicable to music degree requirements. Repeatable.

General Performance

Noncredit Courses

050. Recital. (1). Recital attendance and performance. Laboratory observation of performance media, literature and recital techniques. Elective is required for BA, BM and BMES majors according to the requirements of the degree checklist at the time of enrollment. Repeatable.

060. Topics in Music. (1-3). Topics exploring events, conditions, relationships, styles, etc. in music. See Schedule of Courses for current listing. Not applicable to degree. Repeatable.

Lower-Division Courses

107-207. Piano Repertoire. (1-1). Gives performing and listening experience to piano majors. Repeatable for credit.

121. Italian Diction. (1). For the vocal performer, including a comprehensive study of Italian consonant and vowel sounds.

122. English Diction. (1). For the vocal performer, including a comprehensive study of English consonant and vowel sounds.

148. Double Reed Making and Adjusting. (1). Making and adjusting oboe, English horn and bassoon reeds. Repeatable for credit. Prerequisite: Mus. E. 238 or instructor's consent.


210-211-212-213-214. Ensembles. (1-1-1-1-1). (A) Orchestra; (B) Symphonic Band/Wind Ensemble; (C) A Cappella Choir; University Singers; Concert Chorale; (J) Piano Accompaniment; (K) Opera Theater; (L) Madrigal Singers; Chamber Singers; (N) Wind Ensemble; (O) Saxophone Quartet; (P) Brass Chamber Ensemble; (R) Percussion Ensemble; (S) Beginning String Ensemble and String Chamber Ensemble; (T) Jazz Arts Ensembles I and II; (V) Guitar Ensemble. Repeatable for credit.

217. Instrumental Conducting. (2). Fundamentals of baton technique, elementary score reading and musical leadership. Practical experience in conducting laboratory and classroom groups. Prerequisite: Mus C.128 and 130.

218. Choral Conducting. (2). Fundamentals of conducting, score reading and rehearsal techniques. Practical experience conducting classroom groups. Prerequisite: Mus C. 128 and 130.

221. German Diction. (1). For the vocal performer, including a comprehensive study of German consonant and vowel sounds.

222. French Diction. (1). For the vocal performer, including a comprehensive study of French consonant and vowel sounds.


250-251. Applied Piano Concerto. (2-2). Designed to give students constructive performance experience. Prerequisites: sophomore standing and admittance to the BM performance program.

281. Cooperative Education. (1-8). A field placement which integrates course work with a planned and supervised professional experience designed to complement and enhance the student's academic program. Individualized programs must be formulated in consultation with and approved by appropriate faculty sponsors and cooperative education coordinators. Students may follow one of two scheduling patterns: parallel, enrolling concurrently in a minimum of six hours of course work in addition to their co-op assignment; alternating, working full time one semester in a field study and returning to full school enrollment the following semester; such students need not be concurrently enrolled in any other course. Prerequisites: successful completion of the freshman year and satisfactory academic standing prior to the first job assignment. May be repeated for credit. Offered CR/NC only.

Upper-Division Courses

300. Junior Recital. (1). Required for BM piano majors, performance or accompanying emphasis. Prerequisite: departmental consent.


400. Recital. (1). Prerequisite: departmental consent.


415Y. Voice for Music Theater. (2). Basic repertoire and staging techniques with weekly master class devoted to music theater techniques and concepts. Not applicable to music degree requirements. Repeatable.


450-451. Accompanying Recital. (1-1). Required for BM piano majors, accompanying emphasis. Prerequisite: departmental consent.


Courses for Graduate/Undergraduate Credit

580. Piano Pedagogy. (2). Primarily concerned with the art and science of teaching. Includes observations of master teachers in the University and community.


620. String Pedagogy: Violin and Viola. (2). Required for violin and viola performance majors. A study of tutorial techniques for violin and viola, including the teaching of mini-lessons for instructor and class critique. Prerequisite: violin or viola performance capability or instructor's consent.

625. Voice Pedagogy. (2). Required for voice performance majors. Acquaints the voice major with vocal techniques, concepts and materials of private and class instruction.

651. Advanced Conducting and Score Reading. (2). Baton technique, score reading and musicianship. Prerequisite: Mus. P. 217 or 218 equivalent.

680. Woodwind Pedagogy. (2). Required for woodwind performance majors. A comprehensive study of woodwind instrument techniques, concepts and materials of studio instruction for the advanced student, including the teaching of mini-lessons for instructor and class critique. Prerequisite: performance capability on a woodwind instrument or instructor's consent.

681. Brass Pedagogy. (2). Required for brass performance majors. A comprehensive study of brass instrument techniques, concepts and materials of studio instruction for the advanced student, including the teaching of mini-lessons for instructor and class critique. Prerequisite: performance capability on a brass instrument or instructor's consent.

682. Percussion Pedagogy. (2). Required for percussion performance majors. A comprehensive study of percussion instrument techniques, concepts and materials of studio instruction for the advanced student, including the teaching of mini-lessons for instructor and class critique. Prerequisite: performance capa-
ability on percussion instruments or instructor's consent.

691. Advanced Choral Conducting. (2). A comprehensive study of conducting and rehearsal techniques, analysis and ear training and types of choral composition for the advanced student. Prerequisite: Mus. P. 271 or 278 or equivalent.


710-711-712-713-714. Ensembles. (1-1-1-1-1). (A) Orchestra; (B) Symphonic Band/Wind Ensemble; (F) A Cappella Choir; University Singers; Concert Chorale; (I) Piano Accompaniment; (K) Opera Theater; (L) Madrigal Singers; Chamber Singers; (N) Woodwind Ensemble; (O) Saxophone Quartet; (P) Brass Chamber Ensemble; (R) Percussion Ensemble; (S) Beginning String Ensemble and String Chamber Ensemble; (T) Jazz Arts Ensembles I and II; (V) Guitar Ensemble. Repeatable for credit.

715Y. Voice for Music Theater. (2). Basic repertoire and singing techniques with weekly master class devoted to music theater techniques and concepts. Restricted to persons other than vocal majors. Repeatable.


760. Group Piano Practicum. (2). Supervised group piano teaching for graduate students. Prerequisites: Mus. P. 580 and 581.


790. Special Topics in Music. (1-4). For individual or group instruction. Repeatable with departmental consent.

Courses for Graduate Students Only

841. Special Project in Music. (1-9). Individually supervised study or research emphasizing the personal needs of the student. Repeatable for credit. Prerequisite: Instructor's consent.

842. Special Project in Music. (1-3). Individually supervised study or research emphasizing the personal needs of the student. Repeatable for credit. Prerequisite: Instructor's consent.

843. Piano Pedagogy Seminar. (2). Variable topics, such as (1) advanced techniques in classical piano or private piano (college curriculums); (2) class piano in early childhood; (3) class piano for leisure-age students; (4) class piano in public or private schools, extending the advanced preparation of piano pedagogy students as needed. Repeatable for credit. Prerequisite: Instructor's consent.

852. Introduction to Bibliography and Research. (3). See course listing under musicology-composition department.

875. Graduate Recital. (2). Performance of a full recital featuring the chief performing medium. Prerequisite: consent of instructors in applied area.

874. Professional In-Service Presentation Project. (2). Planning, organizing and presenting a three-hour in-service presentation ("workshop") to in-service private piano teachers, perhaps in conjunction with an established community piano teacher's league, etc. Available as a terminal requirement alternative (in lieu of performance recital) in the Master of Music (piano pedagogy emphasis). Students approved for this terminal requirement option also will be required to perform a major piano work, prepared at acceptable recital level, during semester jury examination within the final year (two semesters) of the degree program. Requires approval of piano performance area faculty. Prerequisite: departmental consent.

Musicology-Composition

Lower-Division Courses

113Q. Introduction to Music Literature. (3). Division A course/elective. Development of skills and techniques used in critical analysis and a comparison of the contrasting styles of both Western and non-Western music. For music majors or students with some musical background.

114. Music Literature Survey. (2). A survey of representative works from the vocal and instrumental repertoire. Prerequisite: Mus. C. 113Q or instructor's consent.

127Q. Theory I. (2). Division A course/elective. Fundamentals of music, melodic writing and analysis, elementary melodic formal structures (cadences, phrase, period), simple harmonic relationships and contrapuntal techniques applied to literature from all periods of music. Studies one selected score being performed during the semester by a University ensemble. Prerequisite: concurrent enrollment in Mus. C. 129.

127Q. Theory III. (2). Division A course/elective. Advanced preparation of piano pedagogy students as needed. Repeatable for credit. Prerequisite: Instructor's consent.

127H. Theory I Honors. (2). Fundamentals of music, melodic writing and analysis, elementary melodic formal structures (cadence, phrase, period), simple harmonic relationships and contrapuntal voice-leading techniques. Prerequisites: concurrent enrollment in Mus. C. 129 and departmental consent.

128. Theory II. (2). A continuation of Theory I. Formal expansion includes binary and ternary structures. Further elaborates basic harmonic structures. Studies another score being performed by a University ensemble. Prerequisites: Mus. C. 127Q and concurrent enrollment in Mus. C. 129 or 130.

128H. Theory II Honors. (2). Formal expansion includes binary and ternary structures. Further elaborates basic harmonic structures. Prerequisites: Mus. C. 127Q or 127H, concurrent enrollment in Mus. C. 129 or 130 and departmental consent.

129. Aural Skills I. (2). Recognition, singing and dictation of melodies from all periods of music. Emphasizes interval training. Instruction assisted by computer.

130. Aural Skills II. (2). Continuation of melodic, rhythmic perception. Includes recognition and dictation of diatonic harmonic structures. Instruction assisted by computer. Prerequisite: Mus. C. 129.

160G. The Heritage of Western Music. (3). Division A course/elective. Acquaints the non-major with the central traditions of Western music. Emphasizes the development of listening techniques by which the student may perceive and understand fundamental musical processes as they exist in the various styles within the Western heritage.

161. Music through the Ages. (3). Open to all students, particularly those involved in alternative schedules. Helps students develop the capacity for critical music listening and an appreciation for all musical styles. Television course.


227. Theory III. (2). The study of contrapuntal forms and textures from music of all periods. Explores melodic, harmonic and rhythmic aspects of this music, as well as basic orchestration techniques related to these textures. Includes study of an appropriate score being performed by a University ensemble. Prerequisite: Mus. C. 127.

228. Theory IV. (2). Study of the larger homophonic forms (sonata, rondo) using techniques acquired in previous semesters. Includes analysis of an appropriate score being performed by a University ensemble. Prerequisite: Mus. C. 227.

229. Aural Skills III. (2). Recognition, singing and dictation of contrapuntal textures with continued harmonic practice emphasizing elementary chromaticism. Instruction assisted by computer. Prerequisite: Mus. C. 130.

230. Aural Skills IV. (2). Summation and expansion of previous skills with emphasis on inner hearing and analysis of music written in previous eras. Instruction assisted by computer. Prerequisite: Mus. C. 229.

245. Jazz Improvisation. (2). Melodic, harmonic and rhythmic creation emphasizing the relationship of scale patterns and seventh chords. Repeatable for credit. Prerequisites: Mus. C. 128 and 130 or instructor's consent.

259 & 260. Applied Composition. (2-2). Individual study in fundamentals of musical composition emphasizing the development and expansion of music materials. May be taken as an elective. May be repeated as an elective by those not majoring in theory-composition. Prerequisites: Mus. C. 127Q or equivalent and instructor's consent.

281. Cooperative Education. (1-8). A field
placement which integrates course work with a planned and supervised professional experience designed to complement and enhance the student's academic program. Individualized programs must be formulated in consultation with and approved by appropriate faculty sponsors and cooperative education coordinators. Students may follow the same or different schedules parallel, enrolling concurrently in a minimum of six hours of course work in addition to their co-op assignment; alternating, working full time one semester in a field study and returning to full school enrollment the following semester; such students need not be concurrently enrolled in any other course. Prerequisite: Successful completion of the thesis may year and satisfactory academic standing prior to the first job assignment May be repeated for credit. Offered Cr/NCr only.

Upper-Division Courses

531. Introduction to Electronic Music. (2). Basic techniques of electronic music. Directed toward musicians who wish to use the electronic medium in teaching, performing or communicating in any way with their constituency.

559-560. Applied Composition. (2-2). Individual study in advanced musical composition emphasizing writing for small ensembles in the smaller forms. For theory-composition majors. Repeatable. Prerequisites: Mus. C 260 and consent of theory-composition area faculty and department chairman to continue as a theory-composition major.

561-562. 18th Century Counterpoint. (2). Contrapuntal devices of the 18th century as found in the works of J.S. Bach. Prerequisite: Mus. C 228.


597-599. Organ Literature and Practice. (1-1). Performance and discussion of works for the instrument of all periods; study of organ design and construction; and practice in aspects of service playing, such as hymn playing, modulation, accompanying and improvisation, required of all organ majors. Repeatable. Prerequisite: Mus. C 228 or departmental consent.

623. Opera Literature. (3). A comprehensive survey of Italian, German, French, Russian, English and American opera literature from the 17th century to the present. Mus. C 113 is strongly recommended before taking the course. Should be only upperclassmen. Not limited to music majors.

624. Oratorio and Cantata Literature. (2). A study of the solo vocal literature of the larger sacred and secular forms from the 17th century to the present. Not limited to music majors.

641. Orchestration. (2). The study of instrumentation, emphasizing idiomatic scoring for various instrumental combinations with an approach to the problems of full orchestra and band scores. Prerequisite: Mus. C 227.

655. Choral Arranging. (2). Scoring for women's, men's and mixed choirs. Includes performance and analysis of student's arrangements in class. Prerequisites: Mus. C 228 and 230 or instructor's consent.

656-660. Applied Composition. (2-2). Individual study of musical composition emphasizing writing for both small ensembles and large groups in the larger forms. Repeatable. Prerequisites: Mus. C 560 and instructor's consent.

661. 16th Century Counterpoint. (2). Analysis and application of the contrapuntal composition techniques of the 16th century. Prerequisite: Mus. C 228.

671. Chromatic Harmony. (2). Advanced study of chromatic harmonic materials of all periods with special attention to the 19th century. Emphasizes analysis and creative writing. Prerequisite: Mus. C 228.

672. Contemporary Techniques. (2). Advanced study of music from impressionism to the present emphasizing related literature and creative writing. Prerequisite: Mus. C 228.

685. String Literature and Materials. (2). A survey and stylistic analysis of music for solo strings and chamber combinations, beginning with the early Baroque period.

726. Voice Literature. (3). A comprehensive survey of early Italian arias. French chansons, German lieder, contemporary English songs and Russian and Spanish literature.

750. Musicology-Composition Workshop (1-4). Repeatable for credit. Prerequisite: instructor's consent.


781. Cooperative Education. (1-8). See Mus. E 781. Offered Cr/NCr only.


790. Special Topics in Music. (1-4). For individual or group instruction. Repeatable with departmental consent.

791-792. Seminar in Music History. (3-3). Develops areas of interest in music history as time permits. Makes no effort at a chronological survey. Includes ideas evoking the most interest and considered by the instructor to be of the greatest professional benefit when interest warrants.

Courses for Graduate Students Only

830. Seminar in Music Theory. (3). An analytical study of the materials used in musical composition from antiquity to the present, employing analytical approaches such as Schenker, Hindemith and serial techniques. Develops analytical perspective rather than compositional skills.

840A-C. Seminar in the Techniques of Composition. (2). Examines the nature of compositional techniques through selected works in different media: (A) large ensembles, (B) small ensembles and (C) solo literature. Prerequisites: Mus. C 671, 672 and 641, or departmental consent.

841-842. Special Project in Music (1-3; 1-3). Individually supervised study or research emphasizing the professional needs of the student. Repeatable for credit. Prerequisite: Instructor's consent.

852. Introduction to Bibliography and Research. (3). Techniques of research and development of bibliography in music and music education. Course must be elected the first available semester of enrollment in MM or MME programs.
876. Thesis. (2).
893. Music of Antiquity Through the Renaissance. (3).
894. Music of the Baroque Era. (3).
895. Music of the 18th Century. (3).
896. Music of the 19th Century. (3).
897. Music of the 20th Century. (3).

School of Performing Arts
Leroy W. Clark, Chair

The School of Performing Arts includes the areas of dance and theatre. The school offers the Bachelor of Fine Arts in Performing Arts/Dance and Bachelor of Fine Arts in Performing Arts/Theatre.

All candidates for the BFA degree must complete the following core courses: Theatre 254, Stage Makeup; Theatre 253, Costuming for the Stage; Theatre 345, Stage Lighting; and Theatre 218, Stage Movement or Dance 210, Ballet 1.

Dance
Major emphasis is placed on modern dance technique with strong supportive classes in ballet. Major course offerings include study in modern dance technique, ballet technique, choreography, dance history, music for dance, repertory, lighting, make-up and costuming. Additional courses are offered in methods of teaching and practice teaching, jazz, tap, ballroom and other dance forms.

The Mid-America Dance Theatre presents at least two performance seasons annually and offers lecture demonstrations, master classes and informal concerts throughout the year. Membership into the company is by audition only. Any student who intends to pursue dance as a major should contact the dance program early in their educational career for assignment to a faculty academic adviser.

Graduation Requirements
Dance majors must complete Dance 501, Modern Dance IV, and Dance 410, Ballet III. A minimum of 42 hours is required in modern dance and ballet with a least 24 of these hours in modern dance technique. All majors must take a minimum of five technique classes per week.

Advancement from one level of technique to the next is not automatic and will be by the instructor’s consent or by audition. Students will be placed at the appropriate technical level upon admission to the program.

All dance majors are required to perform in Mid-America Dance Theatre, and/or a School of Performing Arts/Dance-sponsored performance each semester. Junior and senior dance majors who are not accepted in MADT are required to perform in an approved dance-sponsored performance. This requirement does not apply to senior dance majors during the semester in which they present their senior concert.

Students accepted in MADT may register for Dance 320, Dance Performance, each semester.

All majors present a senior concert to include one solo, one duet and one group dance and must perform in two of these three pieces. At least half of the concert must be new works choreographed by the senior student. The total length of time for the senior concert should be between 20 and 25 minutes. A written documentation of the choreography, performance and production aspects of the concert must be submitted to the faculty for approval, followed by an oral defense of the documentation and concert.

Bachelor of Fine Arts
The general graduation requirements of the University must be met as described in the Academic Information—Requirements for Graduation section of the Catalog. In addition, the following course requirements must be met.

Course Hrs
Dance 201, Modern Dance Technique I 4
Dance 301, Modern Dance II; Dance 401, Modern Dance III; Dance 501, Modern Dance IV 8
Dance 210, Ballet I; Dance 310, Ballet II; Dance 410, Ballet III 8
Dance 305, Choreography I; Dance 405, Choreography II 8
Dance 325 Q, Dance History I 3
Dance 425 Q, Dance History II 3
Dance 315, Music for Dance 3
Dance 505, Choreography III; Dance 605, Choreography IV 6
Dance 320, Performance 3
Total 65

In addition to the above required courses, a minimum of 9 hours should be selected from the following theatre, music, art and dance courses with at least 3 hours in three disciplines:

Theatre: 143 G, The Art of the Theatre; 243 Q, Acting I; 244, Stagecraft; 623 Q, Development of the Theatre I; or 624 Q, Development of the Theatre II
Music: 160 G, The Heritage of Western Music; 315, Music of the 20th Century; or 346, Styles of Jazz
Art H: 122 G, Survey of Western Art: Renaissance and Baroque; 124, Survey of Western Art: Modern; 525, 20th Century Art Before 1945; 526, Art Since 1945; or Art F. 136, Foundation Design I
Dance: 545, Methods of Teaching Dance; 645, Practice in Teaching Dance; 120, Jazz I; 220, Jazz II; 130 B, Tap I; 130 F, Advanced Tap; or 320, Performance

The remaining hours should be selected to fulfill General Education program requirements.

Lower-Division Courses

120. Jazz. (1-2). Introduction to jazz technique, emphasizing work in body isolations, rhythmic patterns and directions, basic steps and history and development of jazz dance in America. Repeatable for credit.

130. Varieties of Dance. (1-2). No previous experience in dance required. A different form of dance may be offered each semester. Repeatable for credit.


150. Dance Workshop. (1-4). Repeatable for credit.

201. Modern Dance Technique I. (2-3). Introduction to study of basic positions, body alignment, stretches and strengthening exercises; emphasizes simple movement phrases to develop understanding of direction, rhythm and dynamics. Repeatable for credit.

210. Ballet I. (2-3). Introduction to basic technique, positions, basic steps, proper body alignment, classroom structure and etiquette and ballet vocabulary. Repeatable for credit.

220. Jazz II. (1-2). Continuation of Dance 120 at intermediate level. Repeatable for credit. Pre-
required. Prerequisite: instructor's consent or by audition.

Upper-Division Courses

301. Modern Dance II. (2-3). Continuation of Dance 201 emphasizing movement phrases. Intermediate level. Repeatable for credit. Prerequisite: instructor's consent or by audition.

305. Choreography I. (4). Focuses on improvisation and composition and includes instruction in production elements: lights, costumes, sets, props, publicity and video production. Students are required to do compositional studies which may include time, space, energy, design, dynamics, rhythm, motivation, sequencing, phrasing, movement qualities and transitions. Prerequisites: one year of modern dance and equivalent to intermediate technical level. Concurrent enrollment in appropriate-level modern dance or ballet technique class required.

310. Ballet II. (2-3). Continuation of Dance 210. Intermediate level. Repeatable for credit. Prerequisite: instructor's consent or by audition.

315. Music for Dance. (3). Study of tempo, meter and quality of sound as applied to movement. Exploration of appropriate music repertoire for dance. Prerequisite: completion of two semesters of modern dance or ballet technique.

320. Dance Performance. (1). Perform in Midwest America Dance Theatre, Senior and/or Choreography concerts, or outside performances approved by Dance faculty. Prerequisite: Audition. May be repeated for credit.

325Q. Dance History I. (3). Division A course/elective. The development of dance up to the 20th century. Study of national origins and period dance movement styles.

401. Modern Dance III. (3). Continuation of Dance 301. Upper intermediate level. Repeatable for credit. Prerequisite: instructor's consent or by audition.

405. Choreography II. (4). Further work in improvisation, composition and production experience. Course culminates in a performance of solo works for an invited audience. Prerequisites: Dance 305 and concurrent enrollment in appropriate-level modern dance or ballet technique class.

410. Ballet III. (3). Continuation of Dance 310. Upper intermediate level. Repeatable for credit. Prerequisite: instructor's consent or by audition.

425Q. Dance History II. (3). Division A course/elective. Twentieth century emphasizing the emergence of ballet and later, modern dance. Study of major choreographers, performers and dance companies.

Courses for Graduate/Undergraduate Credit

501. Modern Dance IV. (3). Continuation of Dance 401. Advanced level. Emphasizes professional technique and performance quality. Repeatable for credit. Prerequisite: instructor's consent or by audition.

505. Choreography III. (3). Focuses on the choreographic process. Students create choreographic studies for more than one dancer utilizing elements studied in Choreography I and II and exploring different choreographic approaches. Further exploration may include environmental, chance, and collaborative choreographies and multimedia approaches. Students are encouraged to explore new approaches to accompaniment, such as live music, self-produced music, unusual or innovative sources. Prerequisites: Dance 405 and concurrent enrollment in appropriate-level modern dance or ballet technique class.


545. Methods of Teaching Dance. (3). Develops teaching skills for elementary schools, high schools, recreation centers, private and professional schools and universities through lesson planning and in-class teaching practice. Prerequisite: Dance 401 or 410.

605. Choreography IV. (3). Further work on the choreographic process begun in Choreography III. Class produces a concert of the students' works at the end of the semester. Prerequisites: Dance 505 and concurrent enrollment in appropriate-level modern dance or ballet technique class.

645. Practice in Teaching Dance. (3). Actual placement in teaching situation with responsibility of teaching ballet, modern and/or jazz in private studios, elementary, high schools, Y's or recreation centers. Prerequisite: Dance 505.

690. Special Topics in Dance. (1-6). For individual or group instruction. Repeatable for credit with departmental consent.

750. Dance Workshop. (1-4). Repeatable for credit.

Theatre Performance Track

A minimum of 69 hours, including Theatre 143Q, 180, 222, 241, 243Q, 244, 253, 254, 272, 345, 359, 380, 450, 455, 542, 623Q, 624Q, 643, 651, 728; with 6 hours chosen from the following: Theatre 221Q, 225 or 230; 3 hours chosen from the following: Theatre 516, 517, 559 or 675; and 3 hours chosen from Dance 201, 210 or Theatre 218.

Technical Theatre and Design Track

A minimum of 69 hours, including Theatre 143Q, 180, 243Q, 244, 253, 254, 272, 344, 345, 359, 380, 450, 451, 544, 546, 623Q, 624Q, 643, 651, 728; with 3 hours chosen from The Bridge 215, 214 or Industrial Technology 120; 3 hours chosen from theatre electives.

Theatre Minor

A minor in theatre consists of the following required classes: Theatre 243Q, 244, 272, 359, 253 or 345 and 3 hours from the following: Theatre 450, 623Q or 624Q.

Communication/Theatre

For the Master of Art in Communication/Theatre, see Communication.

Noncredit Courses

044. Stagecraft Lab. (2). The practical application of classroom theory in a supervised laboratory situation. Must be taken concurrently with Theatre 224.

045. Stage Lighting Lab. (2). The practical application of classroom theory in a supervised laboratory situation. Must be taken concurrently with Theatre 345.

053. Costume Lab. (2). The practical application of classroom theory in a supervised laboratory situation. Must be taken concurrently with Theatre 253.

Lower-Division Courses

143Q. The Art of the Theatre. (3). Division A course/elective. An introduction to the theatre as an art form emphasizing critical appreciation from the viewpoint of the audience.

180. Theatre Practicum. (1). Practical training in the organization and presentation of plays in the University Theatre program. May be organized in the following areas: design and construction of scenery, costumes and properties; the design and execution of stage lighting or makeup; and the organization and practice of theatre management. May be repeated for credit.

218. Stage Movement. (3). Deals with basic warm-ups, strengthening and stamina exercises and corrective-maintenance exercises to aid in the development of an expressive body for the actor.
design. Includes practical work on University Theatre and Experimental Theatre productions.

345. Stage Lighting. (3). R; L arr. Lighting equipment and light design and its relation to scenery design. Emphasizes the problems in schools and colleges. Includes practical work on University Theatre and Experimental Theatre productions.

359. Directing I. (3). R; L arr. Basic theories and principles of stage directing and problems of producing the play with practical experience gained by use of the project methods. Prerequisite: Thea. 243Q, 244, 272 or departmental consent.

375. Directed Projects in Theatre. (24). Independent research or practical and creative projects in the various areas of theatre including performance, design, technical theatre, management and dramatic literature. Repeatable for credit to a maximum of four hours. Prerequisite: departmental consent.

380. Theatre Practicum. (1). Practical training in the organization and presentation of plays in the University Theatre program. The practicum may be organized in the following areas: design and construction of scenery, costumes or properties, the design and execution of stage lighting or makeup and the organization and practice of theatre management. May be repeated once for credit.

450. Contemporary Theatre and Drama: Topics. (3). An investigation of the major developments and directions in theatre and drama since WWII. Includes studies in directing, theatre architecture, design and production methods, as well as dramatic literature. Prerequisites: junior standing (60 hours) or above.

451. Portfolio Review. (1). Senior level. Helps the technical theatre and design student prepare a formal portfolio in one or a combination of the design areas, a resume and presentation as an application suitable for either graduate school or future employment. Prerequisite: must be taken in graduating semester.

455. Senior Jury. (1). For the graduating student in the performance track of the BFA in Performing Arts/Theatre program. Requires a performance of material in recital circumstances. Prerequisite: senior standing.

460. Theatre Internship. (3-15). Advanced theatre production work as arranged by students and the organization and presentation of plays with a professional theatre company. Prerequisites: junior standing or departmental consent. Total of internship activity applicable toward graduation is 15 credits.

Courses for Graduate/Undergraduate Credit

510. Design Project. (1). Advanced work in the problems of stage lighting design, costume design or scenic design. With the permission and supervision of the appropriate faculty member, the student designs for specific productions for either Mainstage or Experimental Theatre. Repeatable twice for credit if taken in different design areas. Prerequisite: instructor's consent.

516 & 517. Playwriting I and II. (3 & 3). Cross-listed as Engl. 517 and 518. The writing of scripts for performance. Emphasizes both verbal and visual aspects of playwriting. If possible, the scripts are performed. Prerequisite: instructor's consent.

542. Advanced Acting. (3). Continued development of methods established in Thea. 243Q with additional emphasis on contemporary vocal and movement techniques. Prerequisites: Thea. 243Q and sophomore standing.

544. Advanced Stagecraft. (3). R; L arr. Explores advanced construction techniques for the fabrication of stage scenery and stage properties. Such operations may include welding, vacuum forming, carpentry and working with a variety of new materials. Students complete practical studio work in design for a variety of productions in dance and theatre. Prerequisite: Thea. 244.

546. Scene Painting. (3). Presented with a lecture-demonstration-studio arrangement. Explores various theatre painting materials and techniques enabling the student to develop some skill as a scenic artist. Prerequisite: Thea. 244.

559. Directing II. (3). R; L arr. Staging and rehearsal techniques emphasizing the problems of the period and stylized play. Prerequisites: Thea. 259 or departmental consent and junior standing.

560. Theatre Special Topics. (2-3). Designed to expand and strengthen the experience of the student academically and professionally. Study of developments in theatre that go beyond, or are related to, courses already offered will give students a much richer preparation for their field of study. Topics include new technology, new materials, contemporary explorations in performance, and in-depth study of production methods.

561. Directing the Musical. (3). An interdisciplinary course utilizing interdepartmental expertise (theatre, dance, music) to teach the student how to produce a musical. Prerequisite: instructor's consent.

562. Advanced Oral Interpretation. (3). Intensive study and analysis of various forms of literature, the techniques of effective oral communication and the building of the individual or group concept of recital. Arranged workshops and festivals. Prerequisites: Then. 221Q and junior standing.

563. Advanced Oral Interpretation. (3). Prerequisities include: the history of literature
cal activity as a social institution and an art form from its beginnings to the 17th century. Includes representative plays, methods of staging and theatrical architecture of various periods.

624Q. Development of the Theatre II. (3). Division A. Course/elective. History of theatrical activity as a social institution and an art form from the 17th century to the present. Includes representative plays, methods of staging and theatrical architecture of various periods.

643. Styles in Acting. (3). Training in, and development of, the special techniques required for period or stylized plays with special emphasis on Greek, Shakespearean, Restoration and modern nonrealistic styles. Prerequisites: Thea. 243Q, 542 and junior standing.

647. Scene Design II. (3). Continuation of Thea. 344 with more advanced work in designing settings for the stage and including studies in scenicographic techniques and exercises in model building. Student designs settings for a production having a single set, a production requiring a simultaneous setting and a production using multiple settings. Requires no laboratory work in theatre production. Prerequisites: Thea. 344 and 345.

651. Scene Study. (3). The synthesis of all previous acting courses. Studies scenes in depth as preparation for performance. Course goal is the presentation of fully realized characterizations in those scenes studied, integrating the elements of the actor’s craft learned in the prerequisite courses. Prerequisites: Thea. 643 and junior standing.

653. History of Costume. (3). R; L arr. Historical survey and individual research of dress from ancient Egypt to present day emphasizing social, political, economic and religious influences. Theory and practice of adapting period styles to the stage. Prerequisite: Thea. 253 or departmental consent.

657. Costume Design I. (3). Covers the techniques of costume design for the stage. Students strengthen and expand their knowledge of techniques in costume design for the stage, film and television. Prerequisites: Thea. 653, Art F. 145.

675. Directed Study. (2-4). Cross-listed as Comm. 675. Individual study or projects. Repeatable for credit with departmental consent. Prerequisite: departmental consent.

725. Dramatic Theory. (3). Critical examination of selected aesthetic theories of the theatrical arts and the relationship of the theories to major dramatic works and theatrical periods. Prerequisite: Thea. 623Q, 624Q or departmental consent.

728. Playscript Analysis. (3). Develops students’ abilities to analyze playscripts from the point of view of those who face the task of staging them. Focuses on studying and testing practical methods of analysis developed by outstanding theatre directors, teachers and critics. Collective analysis and individual projects are part of the course work. Prerequisite: Thea. 623Q or 624Q.

780. Theatre Internship. (3-15). Advanced theatre production work as arranged by students in direction, acting, scenery and lighting, costume design and construction or theatre management with a professional theatre company. Prerequisite: junior standing or departmental consent. Total of internship activity applicable toward graduation is 15 credits.

Courses for Graduate Students Only

820. Investigation and Conference. (2-3). Cross-listed as Comm. 820. Directed research and experimentation for graduate students in some phase of (a) public address, (b) theatre history and production, (c) radio-television or (d) the teaching of speech. Repeatable for credit up to a total of six hours.

823. History of Dramatic Criticism. (3). A survey and analysis of major critical theories from Aristotle to the present.

824. Development of Modern Theatre Styles. (3). An examination of the major movements in the modern theatre since 1870. Emphasizes both literary and physical elements of styles.

The following abbreviations are used in the course descriptions: R stands for lecture and L for laboratory. For example, 4R; 2L means four hours of lecture.
College of Health Professions

M. Diane Roberts, DPH, Dean

The College of Health Professions was established in 1970. Programs of study are offered in dental hygiene, gerontology, health care administration, health science, medical record administration, medical technology, nursing, physical therapy, physician assistant and respiratory therapy. The primary emphasis of the college’s health education programs is the preparation of entry-level health professionals. Additionally, the college provides such services as emergency medical training, continuing education and graduate education for health professionals.

The curricula of the health professional programs build upon a foundation of courses from the liberal arts and sciences, education, health science and business. In addition to the on-campus academic experience, health professional students engage in learning in clinical settings as they care for patients and interact with clients of the health care system. All clinical programs are dependent upon the outstanding health care facilities within the city of Wichita and surrounding areas.

Programs in the college are accredited through the following agencies: the Council on Dental Education of the American Dental Association, the Commission on Accreditation in Education of the American Physical Therapy Association, National League for Nursing, the Association of University Programs in Health Administration and the Committee on Allied Health Education and Accreditation of the American Medical Association.

Degrees Offered

Undergraduate

Of the programs offered at the undergraduate level, seven lead to bachelor’s degrees—gerontology, health care administration, health science, medical record administration, medical technology, nursing and physician assistant. In addition, the Associate of Science is awarded in dental hygiene and respiratory therapy. Students in the emergency medical training program receive a certificate of completion.

Graduate

Four programs lead to the master’s degree—gerontology, health science, nursing and physical therapy. The gerontology program offers courses of study leading to the Master of Arts (MA) degree. This interdisciplinary degree draws upon the health sciences, biological sciences, psychology, economics, sociology, anthropology and political science.

A graduate program leading to a Master of Health Science (MHS) degree with options for emphasis in administration, education or advanced clinical study is offered. Admission to the MHS program of study requires a bachelor’s degree and the fulfillment of additional requirements.

A Master of Science in Nursing (MSN) program, designed to meet the needs and professional goals of the student, is offered for part-time or full-time study. Clinical concentrations are offered in adult nursing, including medical-surgical, community health and gerontology; maternal child nursing; psychiatric/mental health nursing; and nursing administration. Role development in administration, teaching or clinical nurse specialist is available.

An entry-level master’s program (MPT) is offered in physical therapy. The program prepares graduates to enter the clinical practice of physical therapy, where the focus is on health maintenance and prevention of functional disability. Graduates are prepared to evaluate neuromuscular, musculoskeletal and sensorimotor functions.

More information on graduate programs is available in The Wichita State University Graduate Bulletin.

Policies

Undergraduate Admission

Students may be admitted to the College of Health Professions upon successful completion of 24 semester hours with an overall and WSU grade point average of 2.000 or above. Students seeking a bachelor’s degree program in the college must have completed the basic skills requirement (English 101 and 102; Communication 111; and Math 111, 112, 211 or equivalent) with a grade of C or better, or must have earned an associate or bachelor’s degree prior to admission into the college. Those students seeking admission to an associate degree program must have earned a C or better in the basic skills required for the specific program.

Admission to the college does not guarantee acceptance into any of the undergraduate professional programs. To be admitted to a professional program, students must be accepted into The Wichita State University and the College of Health Professions, apply for admission to a particular program and be accepted by the admissions committee of that program. See the individual programs for application procedures.

Progression

To progress with courses offered in the clinical programs, students must earn an S, Cr or C or better in departmental courses required for the major and any other courses so designated by the department. In courses which combine theory and clinical practice, students must receive an S, Cr or C or better in both segments of the course in order to pass the course. Students who fail to meet these requirements may be dismissed from the program. If the student’s overall grade point average remains at 2.000 or above, the student may petition the Committee on Admission and Progression in his/her department to remain in the program. Students should check the individual program sections of the Undergraduate Catalog for additional requirements.

Probation and Dismissal

Students are placed on probation for the next term in which they enroll if their WSU grade point average falls below 2.000. Students remain on probation even though they earn a 2.000 grade point average in the term during which they are on probation if their WSU cumulative grade point average is not at least 2.000. Probation is removed when a student’s WSU grade point average meets the required academic level.

Students on probation may not enroll for more than 12 semester hours in the fall or spring semester, or five hours in the Summer Session, excluding one hour of physical education. Exception to this limitation may be made on the recommendation of a student’s adviser with the approval of the dean of the college.

Students on probation are subject to academic dismissal from the College of Health Professions if their grade point average for the semester during which they are on probation falls below 2.000. Dismissal will not occur until students fail to achieve a 2.000 grade point average for the last 12 hours attempted while on
Students assigned to affiliating health facilities for clinical education will be subject to dismissal from the professional program for failure to comply with the rules, regulations or professional standards governing that facility.

Exceptions
Students may petition the department, college or University for exception to any requirement. Students are required to discuss all petitions with their college/department adviser prior to submission of the petition. Petitions may or may not be approved by the body to whom the petition was made.

Graduation Requirements
All health professions students who are pursuing bachelor's degrees must meet general University requirements and fulfill the course requirements specified in the curriculum of the department offering the degree.

A minimum of 30 credit hours in coursework in residence at WSU is required for all students seeking bachelor's degrees at WSU. In addition, these students must also complete all University, college and departmental requirements for the degree being sought. Completion of University courses is counted toward fulfillment of the residency requirement. For specific requirements, consult the individual departmental sections of the Catalog.

Credit by Examination
Some of the programs in the College of Health Professions offer equivalency or competency examinations. By taking these exams, students may earn credit or receive advanced placement. To qualify for such exams, students must:
1. Be accepted into the program (major) in which the course is offered as part of the professional curriculum
2. Meet any other eligibility requirements stated by the particular department (See the appropriate department's section in the Catalog.)

Exception to these requirements may be granted to nonmajors by the chairperson of the department offering the course with the approval of the College of Health Professions Admissions-Exceptions Committee and the dean.

Students should check with their departmental advisers regarding eligibility and prerequisite requirements for this type of examination. Transcripts will identify the courses and credits received by students taking equivalency/competency examinations. Fees are assessed in advance, for the administration of the examinations.

Cooperative Education
The College of Health Professions is one of the participating colleges in the University Cooperative Education program. This program is designed to provide off-campus paid employment experiences that integrate, complement and enhance the student's regular academic program while providing academic credit. Students are placed for field study experiences in a variety of health settings, including hospitals and community agencies. Individualized field studies are formulated in consultation with the student and the employer and are approved by the departmental faculty advisers and the cooperative education coordinator for the college. Participation in the program requires enrollment for credit in specific cooperative education courses designated by the various academic departments in the college; these undergraduate courses may have prerequisites or other specific requirements for enrollment. To enroll in the program or for more information, students should contact the college cooperative education coordinator or the department adviser.

Clinical Affiliation
The college, because of its location in Wichita, has affiliation agreements with various excellent health facilities which assist in the clinical education of students. The clinical affiliates include a wide variety of hospitals, long-term care facilities, public schools, private practitioners and community agencies.

Liability Insurance Requirements, Health Insurance and Health Standards
Most students are required to purchase professional liability insurance (the specific level is determined by the professional program) as well as personal health insurance at the beginning of the professional phase of a College of Health Professions program. Additionally, other health standards are required prior to entry into the clinical agencies. Students should communicate with individual programs about specific requirement.

Financial Assistance
Scholarships and student loan funds are available for students in health professions. Information on these and other scholarships and loans is available from the Wichita State University Office of Student Financial Planning and Assistance and the department from which the student is seeking a degree or certificate.

Special Certificate Program
The College of Health Professions offers a certificate program in basic emergency care training. It Cooperates with the College of Education in offering a certification program for school nurses (see Nursing).

Basic Emergency Medical Care Training

Department of Health, Administration and Gerontology
A certificate in basic emergency medical care training is offered. The certificate is obtained with successful completion of HS 110. Students who would like to enroll in this course must fulfill all requirements for admission to The Wichita State University and be at least 18 years old.

HS 110 classroom instruction encompasses anatomy and physiology, pathophysiology, emergency recognition and care of medical emergencies and trauma-related injuries. In addition, students spend ten hours of in-hospital observation in such areas as the emergency room, surgery, critical care units and the obstetric and psychiatric departments. A simulated automobile accident provides students with field experience in auto extrication. Successful completion of the course meets the educational prerequisite for taking the state and/or national registry examinations for emergency medical technicians.

Degree Requirements and Course Listings

Dental Hygiene
Department of Dental Hygiene

Associate of Science

The associate program in dental hygiene provides students with a knowledge of the social, dental and clinical sciences and competencies needed by the dental hygienist in contributing to the attainment of optimum oral health for all people. Upon completion of the five-semester program (including one summer), students are eligible to take the national, regional and state examinations
for licensure as dental hygienists. The Wichita State University program is accredited by the Commission on Dental Accreditation.

The Bachelor of Health Science degree is available to students who seek to expand their role in education or administration. Students interested in more information should contact the college dean's office student adviser.

**Professional Curriculum**

**Admission.** In addition to fulfilling all requirements for admission to the University, students wishing to enroll in the dental hygiene program must apply for, and obtain approval of, the Admissions Committee of the Department of Dental Hygiene. Acceptance into the College of Health Professions does not guarantee admission into the dental hygiene program. Persons interested in the dental hygiene program should direct their inquiries to the chairperson of the Department of Dental Hygiene, The Wichita State University, Wichita, Kansas 67208-1695.

To qualify for admission to the dental hygiene program, applicants must be high school graduates or have passed the General Education Development (GED) test.

Students must meet the following admission criteria. They must:
1. Have taken or been enrolled in Biol. 223, Human Anatomy and Physiology; Chem. 103Q, General Chemistry; Engl. 101, College English I; Psy. 111Q, General Psychology.
2. Maintain a minimum grade point average of 2.250 in all college work.
3. Complete The Wichita State University and College of Health Professions general admission requirements.

Students must also have their admission approved by the department's committee on admissions.

**Curriculum.** The following courses, totaling 79 to 84 hours, must be taken by dental hygiene students.

**Course**

**Hrs.**

**Prerequisite courses for admission to the dental hygiene program:**

**Biol. 223, Human Anatomy and Physiology** ........................................ 5
**Chem. 103Q, General Chemistry** .................................................. 5
**Engl. 101, College English I** ....................................................... 5
**Psy. 111Q, General Psychology** .................................................... 3

**Plus the following:**

**Comm. 111, Public Speaking** .......................................................... 3
**Soc. 111Q, Introduction to Sociology** ............................................. 3
**Biol. 120Q, Introduction to Microbiology** ........................................ 4

**DH 101, Preclinical Dental Hygiene** .................................................. 5
**DH 104, Clinical Radiology** ............................................................ 4
**DH 201, Dental Hygiene Concepts** ................................................... 2
**DH 202, Clinical Dental Hygiene I** .................................................. 3
**DH 206, General and Oral Pathology** ............................................... 3
**DH 296, Embryology, Histology and Oral Anatomy** ............................ 3
**DH 301, Dental Materials and Expanded Functions** ........................... 3
**DH 302, Clinical Dental Hygiene II** ................................................ 2
**DH 303, Dental Hygiene Concepts II** .............................................. 2
**DH 304, Dental Hygiene Concepts III** .............................................. 2
**DH 305, Periodontics** ...................................................................... 3
**DH 307, Ethics and Jurisprudence** .................................................. 2
**DH 309, Community Dental Hygiene** ............................................... 1
**DH 311, Dental Health Education** .................................................... 2
**DH 323, Clinical Dental Hygiene III** ............................................... 3
**DH 324, Clinical Dental Hygiene IV** ................................................ 4
**DH 409, Introduction to Research for the Health Professions** ............... 1

**Information related to special requirements is available to students in the office of the Department of Dental Hygiene, The Wichita State University, Wichita, Kansas 67208-1595.**

**Special Requirements**

Students are required to purchase uniforms and instruments needed during clinical learning experiences. Students also are required to purchase professional liability insurance and personal health insurance on an annual basis. In addition, students are required to provide their own transportation to and from the health care agencies used for clinical experiences.

Information related to special requirements is available to students in the office of the Department of Dental Hygiene, The Wichita State University, Wichita, Kansas 67208-1595.

**Lower-Division Courses**

**101. Preclinical Dental Hygiene. (5).** Spring semester only. A presentation of the basic philosophy of dentistry and dental hygiene. Gives consideration to materials that can be employed to prevent oral disease and promote dental health. Gives laboratory instruction in instrumentation for removal of deposits from the teeth. Prerequisite: departmental consent.

**104. Clinical Radiology. (4).** Fall semester only. A presentation of the theory and practice of exposing, processing, and interpreting X-ray films. Uses laboratory periods to gain proficiency in X-ray techniques. Stresses care of the equipment. Prerequisite: departmental consent.

**201. Dental Hygiene Concepts I. (2).** Spring semester only. Presents fundamentals of planning and delivering dental hygiene treatment emphasizing patient education for plaque control. Stresses integration and expansion of material presented in preclinical courses and

the application of this material to the treatment situation. Prerequisite: departmental consent.

**202. Clinical Dental Hygiene I. (3).** Fall semester only. Emphasizes patient care in a clinical setting. Stresses basic instrumentation techniques as well as the prevention of dental disease. Develops patient evaluation and treatment planning skills. Prerequisite: departmental consent.

**206. General and Oral Pathology. (3).** Spring semester only. A survey of general pathology of tissues and organs of human anatomy. Discussions on dental pathology of the teeth, dental pulp and oral tissues. A consideration of the signs, symptoms, and manifestations of oral lesions is accomplished through lectures and visual aids. Prerequisite: departmental consent.

**281. Cooperative Education Field Study. (1-8).** Provides the student with a field placement which integrates theory with a planned and supervised professional experience designed to complement and enhance the student's academic program. Individualized programs must be formulated in consultation with and approved by appropriate faculty sponsors and cooperative education coordinators. Prerequisites: completion of the freshman year and satisfactory academic standing prior to the first job assignment. May be repeated for credit.

**290. Embryology, Histology and Oral Anatomy. (3).** A study of the development and microscopic anatomy of the elementary tissues and organs. Explanation of tooth development, eruption, arrangement, function, morphology and characteristics. Prerequisite: departmental consent.

**Upper-Division Courses**

**301. Dental Materials and Expanded Functions. (3).** Emphasis on practical laboratory phases of modern techniques and the manipulation of materials and equipment used in dental practice and expanded auxiliary practice. Prerequisite: departmental consent.

**302. Clinical Dental Hygiene II. (2).** Emphasis on expanding the role of the hygienist in health care agencies used for clinical experiences. Practicums are provided by the department. Prerequisite: departmental consent.

**303. Dental Hygiene Concepts II. (2).** Seminar discussion of current and advanced clinical concepts and techniques as well as other topics related to future employment opportunities. Prerequisites: DH 201 and departmental consent.

**304. Dental Hygiene Concepts III. (2).** Seminar discussion of current and advanced clinical concepts and techniques as well as other topics related to future employment opportunities. Prerequisites: DH 201 and departmental consent.

**305. Periodontics for the Dental Hygienist. (3).** Seminar discussion of current and advanced clinical concepts and techniques as well as other topics related to future employment opportunities. Prerequisites: DH 201 and departmental consent.
with further demonstration of advanced scaling and heat planning procedures and local anesthesia as it relates to the periodontal patient. Prerequisite: departmental consent.

307. Ethics and Jurisprudence. (2). Spring semester only. A survey of laws governing the practice of dentistry and dental hygiene; types of professional work for which students may qualify; the responsibilities of the profession; the essentials of banking, bookkeeping, office and personnel management and patient records. Prerequisite: departmental consent.

309. Community Dental Hygiene. (1). An introduction to the foundations of dental health in the community, epidemiology, health care systems and organization of community services with fieldwork in applying the learned concepts. Prerequisite: departmental consent.

311. Dental Health Education. (2). Covers the professional philosophy and foundations of dental health education. Students develop dental health educational materials and give presentations to children, adult and minority groups in the community.

321. Clinical Dental Hygiene III. (3). Fall semester only. Continued development of clinical proficiency and utilization of various scaling techniques and instruments. Prerequisite: departmental consent.

324. Clinical Dental Hygiene IV. (4). 16L. Spring semester only. Final semester of clinical dental hygiene. Students utilize information and skills acquired in previous courses and continue to demonstrate proficiency and increase their level of competency in all objectives from DH 202, 302 and 323. Prerequisite: departmental consent.

405. Concepts and Principles of Dental Hygiene Administration. (3). Examination and seminar discussion of the following topics: administrative theory, principles and concepts of organizations, history of management thought, planning and effecting innovation, business administration, financial, operational, motivational, leadership, conflict and communication. Prerequisite: departmental consent.

409. Introduction to Research for the Health Professions. (3). An introduction to the scope, format and use of research in the health professions. Development of the ability to be a critical consumer of professional literature and the initiation of research projects. Prerequisite: departmental consent.

420. Course Development and Methods of Teaching in Dental Hygiene Education. (3). Seminar dealing with the implementation of teaching and learning theory and its application in the formation of a course of instruction. Students gain experience in teaching undergraduate students in laboratory/clinical settings. Prerequisite: departmental consent.

430. Curriculum Development in Dental Hygiene Education. (3). A continuation of DH 420. Focuses on the development of an educational curriculum for a dental hygiene program and additional opportunities are available for instruction in the clinical/laboratory setting. Prerequisite: departmental consent.

455. Personnel Management in Dental Hygiene. (3). Analysis of personnel management and completion of a personnel simulation, including job analysis, recruitment, interviewing, testing, job evaluation, wage determination, training, employee evaluation and career development. Prerequisite: departmental consent.

462. Special Problems in Dental Hygiene. (3). A practical approach to the application and acquisition of basic research techniques as related to dental hygiene. Includes the study and identification of research problems, review of related literature, development of research hypotheses and research methodology.

465. Research in Dental Hygiene. (3). A continuation of DH 462. The research proposal developed there has been implemented, data are collected concerning a special problem in dental hygiene, data analysis is undertaken and conclusions are drawn relative to stated hypotheses. Prerequisite: DH 462.

Gerontology

Department of Health, Administration and Gerontology

Bachelor of Science

The program in gerontology provides students with an introduction to the aged and the aging process. Its interdisciplinary approach allows students to develop a multifaceted background of information necessary to assume entry-level positions in the field of gerontology.

Admission

Students must meet the admission requirements for the College of Health Professions described in the college admission section of the Catalog.

Curriculum

Major. In addition to the basic skills and general education requirements, students must take the following courses:

Course  Hrs.
CS 105, An Introduction to Computers 3
HS 331Q, Principles of Dietetics and Nutrition 3
HAE 503, Organization and Administration of the Health Care System 3
Geron. 100Q, Introduction to Gerontology 3
Geron. 401, Aging, Work and Retirement 3
Geron. 404, Psychology of Aging 3
Geron. 513, Sociology of Aging 3
Geron. 518Q, Biology of Aging 3
Geron. 550L, Aging Network 3

Geron. 501, Internship in Gerontology 3

Minor. Students must have at least 15 hours in gerontology including: Geron. 100Q, Geron. 550L; and nine hours from the following—Geron. 401, 404, 513 and 518Q.

Lower-Division Courses

100Q. Introduction to Gerontology. (3). Division B course/elective: Introduction to the field of gerontology, including basic concepts, issues and approaches.

150. Workshop in Gerontology. (1-3). Provides specialized instruction, using a variable format in a geronologically relevant subject. Repeatable for credit.

Upper-Division Courses


334Q. Developmental Psychology. (3). Cross-listed as Psy 334Q. Division B course/elective.

401. Aging, Work and Retirement. (3). Examines the impact of population aging upon the nation; income and poverty among the elderly, retirement and work choices; the impact of lifetime income. Social Security, Medicare, private pensions and health on the income security of the elderly. Prerequisite: Geron. 100Q.


481. Cooperative Education. (3-6). Same as Geron. 501 but offered as part of the Cooperative Education program. See Geron. 501 for description and prerequisites.

Courses for Graduate/Undergraduate Credit

501. Internship in Gerontology. (3-6). A specially designed field experience for students who need or desire training to enhance their professional abilities and skills in gerontology and for whom academic credit is appropriate. As part of the internship, students collectively meet one hour a week with the field placement supervisor. Repeatable for credit to a total of six hours. Prerequisite: 12 hours of gerontology credit and instructor's consent.


512. Issues in Minority Aging. (3). Cross-listed as Min. S. 512. Prerequisites: Min. S. 100Q, Geron. 100Q, Soc. 111Q or instructor's consent.


514. Anthropological Perspectives in Gerontology. (3). Cross-listed as Anthr 514.

518Q. Biology of Aging. (3). Cross-listed as Biol. 518Q.

537. The Social Consequences of Disability. (3). Cross-listed as Soc. 537.

550. Selected Topics in Gerontology. (1-6). Study in a specialized area of gerontology with the focus upon preprofessional programs and current issues in the field of aging. Emphasizing knowledge and skills in applied areas of gerontology as they relate to an emerging area of research and application. Repeatable up to six hours. Prerequisite: Instructor's consent.

590. Legal Aspects of Health Care Administration. (3). Cross-listed as HAE 590.


663. Economic Insecurity. (3). Cross-listed as Econ. 663.

700. Grant Proposal Preparation. (3). Concerned with the process of research and project proposal development, including response to published guidelines, project planning and proposal development and submission. Examines grant funding, including types of funding sources and their purposes and methods and processes of proposal evaluation. Students write and evaluate proposals.

720. Independent Readings in Gerontology. (1-3). Directed study in a specialized topic in gerontology. Repeatable up to six hours. Prerequisite: 12 hours of gerontology credit and departmental consent.


750. Workshop in Gerontology. (1-3). Provides specialized instruction, using a variable format in a gerontologically relevant subject. Repeatable for credit.

761. Cooperative Education. (3-6). Same as Ger. 810 but offered as part of the Cooperative Education program. See Ger. 810 for description and prerequisites.

789. Multidisciplinary Perspectives on Aging. (3). Introduction to the advanced study of the process of aging from a multidisciplinary point of view. Does not count for degree in gerontology. Prerequisite: admission to graduate school. Not open to students with an undergraduate major or minor in gerontology.

Courses for Graduate Students Only

800. Seminar in Gerontology I (3). Advanced study of the theories of aging from a multidisciplinary perspective emphasizing social gerontology. Prerequisite: Ger. 798 or 12 hours of gerontology or instructor's consent.

801. Field Research in Gerontology. (3). An examination of the methods of participant observation and interview as approaches to understanding aging and the aged. Students gain practical experience in these methods through individual fieldwork projects. Prerequisite: Ger. 798, 12 hours of gerontology credit or instructor's consent.

802. Social Policy and Aging. (3). The analysis and evaluation of social policy issues related to aging and old age. Emphasis on the importance of social values and historical context for understanding current policies and practices. Prerequisite: Ger. 798, 12 hours of gerontology or instructor's consent.

810. Advanced Gerontology Internship. (3-4). Integrates academic gerontology and practical experience emphasizing application of research findings. Students are assigned to an agency or organization engaged in planning, administering or providing direct services to older people. Includes the intern developing and being examined upon a comprehensive internship paper. Prerequisites: 12 hours of gerontology credit and instructor's consent prior to registration.

820. Thesis. (1-3). Repeatable, but total credit hours counted toward degree shall not exceed four hours.

Health Care Administration
Department of Health, Administration and Gerontology

Bachelor of Science in Health Administration

The program in health care administration seeks to develop professionally competent individuals to serve in administrative capacities in the health field. Health care administrators are employed in a variety of health facilities and organizations—hospitals, nursing homes, medical group practices and public clinics, health insurance organizations, educational institutions and governmental agencies at federal, state and local levels. The program is an approved member of the Association of University Programs in Health Administration. Upon satisfactory completion of the courses as outlined, plus eight weeks of practice in a selected area, students receive the Bachelor of Science degree. Additional information regarding the selected areas of special emphasis can be obtained from the chairperson of the Department of Health, Administration and Gerontology.

A new minor in Health Care Administration is available to any student not pursuing a degree in Health Care Administration. A minor consists of 15 hours of Health Administration Education courses. The required courses are HAE 410, Community Health Concepts; HAE 503, Organization and Administration of the Health Care System; and HAE 590, Legal Aspects of Health Care Administration. An additional 6 hours of elective HAE credits are required.

Admission
In order to be admitted to the health care administration curriculum, students must fulfill the following requirements. They must:

1. Be enrolled in or admitted to The Wichita State University
2. Have completed 45 hours in the required lower-division courses, including 9 hours of basic courses
3. Have an overall grade point average of 2.000 or above in all college work completed and no grade lower than C in all required courses
4. Submit to the chairperson of the health administration department a letter of intent including semester of enrollment. Intent to enroll forms may be obtained from the Department of Health, Administration and Gerontology, 401 Ahlberg Hall.

Progression
Students in the health care administration major are required to maintain a cumulative grade point average of 2.25 in their required work, including courses taken in business and health care administration. Students failing to meet this requirement will have one semester to bring their grade point average to 2.25. Failure to do so will result in dismissal from the program.

Curriculum
Undergraduate
Major. The following courses, totaling 124 hours, are required for a major in health care administration. This curriculum meets both the University's general education and the program's requirements. All undergraduate students are strongly encouraged to take HAE 503 before taking other health administration courses.

Course Hrs.

Basic Skills Courses (12 hours)*
Communications (9 hours)
Engl. 101, College English I .......................3
Engl. 102, College English II ......................3
Comm. 111, Public Speaking ......................3
Math 111, College Algebra or equivalent ..........3

Distribution Courses (30 hours with 9 hours of G courses)
Division A, Humanities and Fine Arts (at least nine hours in three different departments and at least five hours in General Studies courses)
Lower-Division Courses

111Q. Introduction to Community Health. (3). Division B course/elective. Concerned with modern people and their effort to achieve harmony within the community and an analysis of people's inner and outer ecosystems as they relate to contemporary health issues.

281. Cooperative Education Field Study. (1-8). Provides the student with a field placement which integrates theory with a planned and supervised professional experience designed to complement and enhance the student's academic program. Individualized programs must be formulated in consultation with and approved by appropriate faculty sponsors and cooperative education coordinators. Prerequisites: completion of the freshman year and satisfactory academic standing prior to the first job assignment. May be repeated for credit.

Upper-Division Courses


440. Health Care Administration Practicum. (6-9). Provides an opportunity for field experience in the health care system. Students must select with the consent of an adviser a specific internship in one of the following special areas: health care administration, nursing home administration, governmental health agency administration, voluntary health agency administration or hospital departmental administration. Requires a written report. Prerequisite: senior standing or departmental consent.


490. Independent Study in Health Care Administration. (3). Supervised intensive study of special topics and problems relating to health care delivery. Repeatable up to six hours. Prerequisite: departmental consent.

Courses for Graduate/Undergraduate Credit

503. Organization and Administration of the Health Care System. (3). Analysis of the nature of health and the input to health and health care delivery. Discusses general systems theory and systems analysis in relation to health care. Emphasizes the interconnectedness of economic, political, and social aspects of the health services system. Considers current trends and the role of planning and examines student's in guest lectures with professional expertise in relevant areas. Prerequisite: departmental consent.

504. Health Economics. (3). Cross-listed as Econ. 665. An analysis of health care systems in industrialized nations for the needs of the nation and the supply of health care services, the quantity, quality, and pricing of health services; the need for insurance; and the role of the government in the health sector. Prerequisite: HAE 503 or Econ. 202.

505. The Politics of Health. (3). Cross-listed as Pol. S. 505. Shows how government in the United States makes decisions in the health field, describes the political forces shaping governmental policy in health, and analyzes the arguments for and against an increased governmental role in health. Prerequisite: HAE 503, Pol. S. 121 or departmental consent.

507. Health Planning. (3). Discusses strategic business planning in health services management. Includes a strategic management scheme which will accommodate change and encourage innovation and enhanced productivity. Presents an identification of and adaptation to strategies and options in an anticipatory time frame that provides the organization with protection against the perils of decision-making in traditional entrepreneurial organizations. Prerequisites: junior standing and instructor's consent.

509. Health Care Operations Analysis. (3). An examination of methods for measuring the operational efficiency and effectiveness of health care and medical care programs. Includes methods to analyze and evaluate current operations and approaches to plan better manpower, facilities, technology, financial planning, and management control systems in a health setting. Prerequisites: HAE 503, Math. 111 or equivalent, Mgmt. 360 and junior standing.

510. Health Finance. (3). An examination of the principles of financial analysis and management for health care institutions. Emphasizes understanding and applying general financial concepts to the health setting. Considers financial organization, sources of operating revenues, management of working capital and budgeting utilizing examples for hospitals and other health organizations. Prerequisites: HAE 503 and Acct. 210 or equivalent.

565. Concepts of Quality Assurance in Health Care. (3). For health care personnel; focuses upon current social concerns with assessing quality of health care and appropriate utilization of activities and resources. Prerequisite: departmental consent.

590. Legal Aspects of Health Care Administration. (3). Cross-listed as Geron. 590. A study of the law as applied to the health field, considers such items as release of information, subpoena, records and testimony; settlement of claims (insurance); doctor-patient, nursing home relationship and legal consents; and other topics. Prerequisite: junior standing or departmental consent.

565. Concepts of Quality Assurance in Health Care. (3). For health care personnel; focuses upon current social concerns with assessing quality of health care and appropriate utilization of activities and resources. Prerequisite: departmental consent.

605. Health Services Research. (3). Deals with intermediate statistical procedures and research designs that health professionals must understand in order to intelligently analyze research in the health care field and to conduct research themselves. Covers the designs of experimental, survey and ex post facto research plus statistical techniques, including correlation coefficients, the f test, chi square and two-way analysis of variance. Prerequisite: departmental consent.

684. Health Administration Policy. (3). Cross-listed as Mgmt. 684. Gives graduating seniors an understanding of the structure of health care organizations, including the various roles...
and responsibilities managers have within these organizations. Exposure to management, policymaking and strategic planning processes is vital if students are to function in administrative positions in health care administration. Prerequisite: HAE 503 and at least one other HAE course or departmental consent.

685. Computer Applications in Health. (3).
Data reduction, summarization, editing and analysis using technical assistance of micro and mainframe computer for operational research and administrative purposes. Investigates health data bases from hospitals or other agencies such as state health department, FRO agency, HSA. More emphasis on microcomputers than on large computers with more statistical and graphical capacity. Prerequisite: HAE 605 or instructor’s consent.

686. Seminar in Health Care Administration. (3).
In-depth discussion and analysis of selected topics in health care administration. Topics vary from semester to semester and include examination of specific financial, managerial and operational problems and characteristics of health service organizations and agencies. Prerequisites: HAE 503 and at least one other HAE course.

720. Community Health Organization and Administration. (3).
Introduction to the organization and activities in the health system—roles and problems. Introduction to administrative problem-solving as a structured process. Prerequisite: instructor’s consent.

Courses for Graduate Students Only

808. Epidemiology of Chronic Disease. (3).
The study of the distribution and determinants of chronic diseases and injuries in human populations. The frequencies and types of illnesses and injuries in groups of people and the factors that influence their distribution. Prerequisites: graduate school enrollment, HAE 605 or instructor’s consent.

Gives state-of-the-art techniques in health care accounting and provides a comprehensive coverage of financial theories and applications in health care. Prerequisite: instructor’s consent.

825. Health Care Marketing. (3).
Marketing management for health services; examines the problem of organizational response to consumer desires and needs. Covers consumer behavior and development of marketing mix, product policy and market strategy appropriate to the specific situations of various health care institutions. Prerequisite: Mkt. 800 or equivalent or departmental consent.

Health Science

Department of Health, Administration and Gerontology

A variety of applied/clinical courses in the basic health sciences are offered. These courses are applicable to several departments within the college at the undergraduate and graduate levels.

The programs leading to the Bachelor of Health Science, the Master of Health Science and the Master of Arts in Gerontology are administered by the Department of Health, Administration and Gerontology. For more information about the master’s degree program, refer to The Wichita State University Graduate Bulletin.

Bachelor of Health Science

The program leading to a Bachelor of Health Science degree builds upon the foundation of an associate degree or other appropriate credential in an allied health area. The program offers additional study in health science, management or education, research or statistics and aging studies. Graduates of the program are prepared to expand their roles in health service areas and further their education in selected graduate programs such as the master’s degree in health science or gerontology.

Admission to the program requires that students have completed an associate degree or have post-secondary health credentials, hold a grade point average of 2.00 or higher, have completed the basic skills component of the WSU general education program and be admitted to the College of Health Professions.

Degree Requirements. In addition to the WSU general education and basic skills requirements, the student is required to complete 27 credit hours in the following areas: health science (9), management or education (9), research or statistics (3) and aging studies (6). A total of 124 hours which includes these specified requirements is essential for graduation.

Course Hrs.
Health Science—9 hours from the following
HS 301, Pharmacology ......................... 3
HS 331Q, Nutrition ................................ 3
HS 401, Pathophysiology ...................... 3
HS 531, Applied Principles of Nutrition . 3
HS 575C, Physiology of Special Cases .... 3

Management and Education—9 hours from the following
HAE 410, Community Health Concepts ... 3
HAE 501, Instructional Design in Health Education .............................................. 3
HAE 503, Organization/Administration in the Health Care System .......................... 3
HAE 504, Health Economics .................... 3
HAE 505, Politics of Health ....................... 3
HAE 507, Health Planning ...................... 3
HS 575A, Legislative Aspects .................. 3
HS 575B, Survey Techniques in Marketing ......................................................... 3
HAE 590, Legal Aspects of Health Care Administration ............................................ 3

Research and Statistics—3 hours from the following
DH 462, Special Problems in Dental Hygiene ....................................................... 3
HAE 605, Health Services Research ........ 3
HAE 685, Computer Applications in Health ......................................................... 3
or any 3 hour statistics course

Aging Studies—6 hours from the following
Geron. 513, Sociology of Aging ............... 3
Geron. 550D, Health Maintenance of the Older Adult .......................................... 3
Geron 401, Aging-Work-Retirement .......... 3
or other courses recommended by the adviser

Students interested in the program should contact the College of Health Professions’ dean’s office for advising and further information.

Lower-Division Courses

101. Emergency Care: First Responder. (3).
Specifically for the general public who respond to the initial care of emergency situations in the home or in public areas. Participants learn to provide vital, stabilizing and often urgent life support care prior to the arrival of ambulance personnel. Also students are certified in basic cardiopulmonary resuscitation according to the standards of the American Heart Association. Prerequisite: departmental consent.

110. Basic Emergency Medical Care Training. (10).
SRi 4L. Identifies principles of basic emergency medical care. Discussion includes anatomy, physiology and emergency recognition and care of medical emergencies and trauma-related injuries. Practicum and discussion provide the opportunity to apply these principles. Students also spend ten hours in hospital observation. Prerequisite: departmental or instructor’s consent.

150. Workshop in Health Sciences. (1-4).

201. Orientation to Health Professions. (2).
An examination of the health team concept, the role and relationship of the various providers of health care and the criteria for the selection of a health career. Emphasizes the health team concept.

231G. Current Issues in Food and Nutrition. (3).
Division C course/elective. Survey course; examines the various controversies, fads and misconceptions surrounding nutrition and health; the cultural and historical aspects of food in America; and the political aspects of food and farm policy. Includes basic nutrition principles needed to fully understand the issues discussed.

Upper-Division Courses

301. Clinical Pharmacology. (3).
A survey of therapeutic terms, drug actions, dosage, toxicology and application of drugs in the clinical setting. Prerequisites: Biol. 223 or equivalent and Chem. 103Q or 111Q or equivalent or
instructor's consent.

315. Head and Neck Anatomy. (2). An in-depth study of the landmaarks, muscles, nerves, vascular supply, etc., of the head and neck region.

331Q. Principles of Dietetics and Nutrition. (3). Division C course/elective. A study of human dietetic and nutritional needs in the clinical setting. Covers composition and classification of foods, vitamins and their function; food and public health laws; and nutrition under special conditions. Gives a detailed application of dietetic and nutritional knowledge applied to various clinical conditions.

385. Health Care Team Concepts. (1-6). A seminar and practicum course which provides opportunity for health professionals to share experiences as members of the health team. Departments select the number of credit hours needed for students within their program. Prerequisite: instructor's consent.

388. Clinical Anatomy. (6). Fall semester. Further the understanding of the health professional in a comprehensive and/or specific area of human anatomy. Emphasizes human anatomy of the thorax, abdomen, pelvis, head and neck. Prerequisites: Biol. 225 or equivalent, instructor's consent, and enrollment in one of the professional programs.

389. Clinical Anatomy. (3). Spring semester. A continuation of HS 388 emphasizing human anatomy of the genital-urinary, neuromusculoskeletal system and neuro-anatomy. Prerequisites: HS 388, instructor's consent and enrollment in one of the professional programs.

390. Clinical Physiology. (3). Further the understanding of the health professional in a comprehensive and/or specific area of human physiology and the clinical application of this knowledge in patient management. Departments select the number of credit hours needed for their program and offer them under this course number with a designated subsection. Prerequisites: instructor's consent and enrollment in one of the professional programs.

400. Introduction to Pathophysiology. (3). Cross-listed as Nurs. 400. For professional upper-division students enrolled in the College of Health Professions. Focuses on the essential mechanisms of disordered function which produce common diseases. Discusses some common diseases, but as examples of the basic processes covered, not as part of an exhaustive inventory. Presents the health professional with accessible, usable and practical information they can broadly and quickly apply in their clinical or laboratory experience, or use as a basic pathophysiological course before taking the more specific professionally related pathophysiology courses. Prerequisite: instructor's consent or enrollment in upper-division CHP professional courses.


421. Applied Clinical Pharmacology. (3). Provides a practical knowledge of pharmacotherapeutics. Emphasizes the pharmacodynamic and toxicologic properties of chemotherapeutic agents and of drugs affecting the cardiovascular and autonomic nervous systems. Prerequisites: current enrollment in HS 390 and instructor's consent.

422. Applied Clinical Pharmacology II. (3). A continuation of HS 421 emphasizing drugs affecting the excretory, endocrine and central nervous systems. Prerequisites: HS 421 and instructor's consent.

430. Introduction to Fluids and Electrolytes. (2). Concepts of fluid and electrolyte balance in health and disease; includes discussion of clinical cases of diagnostic and therapeutic interest. Prerequisites: Chem. 103Q, Biol. 226 or equivalent and departmental consent.

450. Workshop in Health Sciences. (1-4).

Courses for Graduate/Undergraduate Credit

501. Instructional Design in Health Education. (3). Assists health professionals construct health science curriculum. Emphasizes identification of appropriate instructional strategies and the application of educational principles, writing behavioral objectives and the acquisition of supplementary materials. Special emphasis to program development in school, community and patient education settings. Prerequisite: junior, senior or graduate standing in one of the professional programs or instructor's consent.

510. Clinical Departmental Management. (3). Presents concepts and methods of clinical department management through lectures, discussion, group interaction and individual problem solving and situational analysis projects. Provides information pertinent to department management majors, department directors, shift supervisors and staff personnel who need an understanding of departmental management of clinical revenue generating departments. Prerequisites: senior standing or greater in health professions and Mgmt. 360 or instructor's consent.

511. Neuranaomy and Neurophysiology. (3). 2R; 2L. Study of the structure, physiology and functions of the central and peripheral nervous systems. Prerequisite: HS 310 or CDS 214.

521. Independent Study. (1-6). Offers reading and conference experience to complete a course requirement or provide enrichment in a specific area. Prerequisite: upper-division or graduate standing or department chairperson's consent.

531. Applied Principles of Nutritional Support and Therapy. (3). A study of the principles of nutritional support and diet therapy. Investigates the dietary concerns of a variety of clinical disorders including gastrointestinal disorders, diabetes mellitus, cancer, burns, obesity and weight loss, kidney and cardiovascular disease, parasitical and enteral nutrition and surgical conditions. Discusses nutritional assessment, data interpretation, case plan development, record keeping and diet communication. Prerequisite: HS 331Q or instructor's consent.

350. Advanced Perinatal Cardiorespiratory Care. (3). Cross-listed as RT 356. Focuses on diagnostic and therapeutic modalities used in the care of high risk mothers and infants. Includes equipment and techniques used in tertiary care perinatal centers: high frequency ventilation, ECMO, air transport, and others. Emphasizes respiratory care and medical management of critically ill and difficult-to-treat patient. Prerequisites: RT 450 and 203 or instructor's consent.

570. Interpretations of Sexuality for Health Professions. (3). Cross-listed as Nurs. 570. Elective. Strategies to assist clients and families cope with sexual problems and disorders. Emphasizes relating varying interpretations of the biological, psychological and cultural aspects of sexuality to the helping professions. Open to nonnursing majors.

575. Special Topics or Selected Topics. (1-4). Lecture-discussion focuses on a discrete area content relevant to the health disciplines. In-depth study of particular topic or concept, including didactic and current research findings and technological advances relevant to the topic. Prerequisite: instructor's consent or enrollment in upper-division CHP courses. Repeatable up to six credit hours with departmental consent.

700. Gross Anatomy. (3). 3R; 1L. For students in the physical therapy program. Study of the structure of the human body including embryology; emphasizes integration of embryological and anatomical information with human functional abilities. Prerequisite: four semesters of biological sciences or departmental consent.

701. Issues in Health Care. (3). An in-depth look at current issues facing health professionals. Topics may be presented in lecture, seminar, simulation and with guest speakers. Presents trends in health care, ethics, consumerism and current research findings; includes disease prevention and health promotion; stress, consumerism and current research findings as they relate to current trends in the health professions. Prerequisite: graduate standing.

703. Evaluation in the Health Professions. (3). Presents the background and methods for evaluating performance in the health professions. Emphasizes the planning, development and use of evaluation tools in the clinical setting as well as the planning and use of evaluation tools in educational and professional settings.


705. Health Services Research. (3). An examination of statistical research methods used by health care professionals and organizations. Includes presentation of information, measures of location and variation probability, expectation, sampling distributions, hypothesis testing, analysis of variance and simple research designs. Prerequisite: upper-division statistics course or consent of MHS graduate coordinator.
706. Characteristics of the Adult in Professional Education. (3). Helps students understand the process of accomplishing professional development throughout the lifespan of the individual. Students explore the concept of professionalism and study the processes of health education, the demands of practice and the learners themselves. There are opportunities to apply knowledge, skills and abilities to real life situations through discussions, readings and reports in class. Prerequisites: HS 501 and 708.

708. Teaching and Learning Strategies in Health Science. (3). Examines the various means of presenting health knowledge and couples these teaching strategies with the attitudes and types of student bodies that will receive this knowledge. Examines the nature of health care curriculum in depth, and procedures for developing and improving them. Explores health education curricula. Prerequisite: departmental consent.

710. Research Methods in Health Professions. (3). Examination of research methodology as related to the health professions. Includes identification of significant health care research problems, development of relevant hypotheses, review and critical evaluation of literature and identification of methodology pertinent to the hypotheses developed. This methodology addresses the selection of sample, measurement instrument and research design.

712. Administration of Hospital-Based Education. (3, 2R-2L). Historical perspective of hospital education, resources and requirements for providing institution-wide educational services, identification and analysis of educational needs, hospital's role in community health planning and program evaluation.

714. Quality Assessment and Assurance for Health Care Institutions. (3). Introduction to the organization and activities relevant to quality assurance from both inside and outside the institution—roles and problems. Introduction to quality assurance problem-solving as a structured process. Prerequisite: instructor's consent.

720. Neurosciences. (3) 3R-2L. Integration of embryology, anatomical structure, physiology and functions of the central and peripheral nervous systems with human functional abilities. Prerequisite: HS 700 or departmental consent.

750. Workshop in Health Related Professions. (1-4). An examination of relevant topics directly and/or indirectly related to the delivery of health care service.

Courses for Graduate Students Only

800A. Seminar in Health Science. (1). Recent developments and issues affecting the financing, organization and management of health care resources in both the public and private sector of our nation's medical care system. Prerequisite: HS 701 or departmental consent.

800B. Seminar in Health Education. (1). Covers current trends and directions in allied health education in both patient care and academic settings. Prerequisite: HS 701 or departmental consent.

810. Practicum/Project. (3). Enhances and complements the academic experience of students pursuing the Master of Health Science degree. Provides an opportunity to link the student's academic studies with actual practice in direct observation and supervised participation of the administrative/educational process in a selected health care organization. Students carry out their assigned tasks under the guidance and direction of a faculty member of the College of Health Professions. The student also may be under the direction of a field instructor/preceptor from the host agency.

885. Thesis. (1-3). Repeatable to a maximum of six hours. Prerequisite: consent of thesis adviser.

Medical Record Administration

Department of Health, Administration and Gerontology

Bachelor of Science in Medical Record Administration

The Bachelor of Science program in Medical Record Administration, offered through the Department of Health, Administration and Gerontology, is designed to prepare administrators and health information coordinators for medical record departments. After completing a three-year preprofessional sequence at The Wichita State University, students must apply to the Department of Medical Record Administration at The University of Kansas Medical Center (KUMC) to complete the professional sequence. The professional sequence includes directed practice and clinical application which may be taken at hospitals or other health institutions that are officially affiliated with The University of Kansas Medical Center and that are approved by the American Medical Record Association. After completing these requirements, students receive the Bachelor of Science (BS) in medical record administration from The Wichita State University and are eligible to become registered by successfully completing the registration examination given by the American Medical Record Association.

Preprofessional Curriculum

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Math 111, College Algebra (or equivalent)</td>
<td>3</td>
</tr>
<tr>
<td>Eng 101, College English I</td>
<td>3</td>
</tr>
<tr>
<td>Eng 102, College English II</td>
<td>3</td>
</tr>
<tr>
<td>Comm 111, Public Speaking</td>
<td>3</td>
</tr>
</tbody>
</table>

Distribution Courses (30 hours of which at least nine hours must be taken in General Studies courses)

Admission to Professional Curriculum

Students who have taken their college work at The Wichita State University or at another accredited college or university may apply for transfer into the fourth year of the program conducted at The University of Kansas Medical Center in Kansas City, Kansas. Applications must be received by October 1 of the student's junior year so that a January review can be made and the student notified of acceptance into the program that begins in June. Each student must:

Other required courses

Econ. 201Q, Principles of Economics .........................3
Psy. 514, Psychology of Illness .......................3
Soc. 538, Medical Sociology ..................................3
B. Law 130Q, Introduction to Law ...............3
CEST 704, Introduction to Education Statistics .......3
Engl. 210, Technical Writing Composition ..........3

Recommended electives

CS 101Q, Introduction to Computers ......3
Mgmt. 360, Management and Organizational Behavior ..3
Pers. 450, Personnel Management ........3
HAE 410, Community Health Concepts ..........3
HAE 503, Organization and Administration of the Health Care System ......3
HAE 504, Health Economics ..................3
HAE 505, Politics of Health .................3
HAE 507, Health Planning ..................3
HAE 509, Health Care Operations Analysis ....3
HAE 590, Legal Aspects of Health Care Administration ......3

Additional hours of electives to total 80 hours of preprofessional courses
Preprofessional Curriculum

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic Skills (12 hours)</td>
<td></td>
</tr>
<tr>
<td>Engl. 101 and 102, College English I and II</td>
<td>6</td>
</tr>
<tr>
<td>Comm. 111, Public Speaking</td>
<td>3</td>
</tr>
<tr>
<td>Math. 111, College Algebra</td>
<td>3</td>
</tr>
</tbody>
</table>

Division A, Humanities and Fine Arts

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(9 hours)*</td>
<td></td>
</tr>
<tr>
<td>Nine hours in at least three different departments</td>
<td>9</td>
</tr>
</tbody>
</table>

Division B, Social and Behavioral Sciences

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psy. 111Q, General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>Electives</td>
<td>3</td>
</tr>
</tbody>
</table>

Division C, Natural Sciences and Mathematics (48 hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biol. 203Q, Organismal Biology</td>
<td>5</td>
</tr>
<tr>
<td>Biol. 204, Cellular Biology</td>
<td>5</td>
</tr>
<tr>
<td>Biol. 223, Anatomy/Physiology</td>
<td>5</td>
</tr>
<tr>
<td>Biol. 330, General Microbiology</td>
<td>5</td>
</tr>
<tr>
<td>Chem. 111Q, General Chemistry**</td>
<td>5</td>
</tr>
<tr>
<td>Chem. 112Q, General and Inorganic Chemistry**</td>
<td>5</td>
</tr>
<tr>
<td>Course coverage in organic chemistry (Chem. 531, five hours, or Chem. 533 and 534, five hours)</td>
<td>5</td>
</tr>
<tr>
<td>Chem. 561, Introduction to Biochemistry, or HS 400, Introduction to Pathophysiology</td>
<td>3</td>
</tr>
<tr>
<td>Med. T. 405Q, Medical Immunology</td>
<td>3</td>
</tr>
<tr>
<td>Electives from areas of health science, biological sciences, chemistry, physics, mathematics or others as approved by Department of Clinical Sciences (including four hours of &quot;G&quot; and/or &quot;Q&quot; courses)</td>
<td>7</td>
</tr>
</tbody>
</table>

*Students may wish to select General Studies courses to satisfy the University graduation requirement of General Studies courses. (See Academic Information-General Studies section of the Catalog.)

**May substitute Chem 123Q-124Q, General and Analytical Chemistry (10 hours), if prerequisites are met. Check with adviser.

Admission to the Professional Curriculum

Applications should be submitted to the Department of Medical Technology by May 1 for fall entry, October 1 for spring entry and March 1 for summer entry.

To qualify as a candidate for admission to the professional phase the student must:
1. Be admitted to The Wichita State University
2. Be in the process, or have completed, the preprofessional requirements
3. Submit application to department
4. Submit three letters of recommendation
5. Have a minimum GPA of 2.500
6. Complete professional goal statement.

Acceptance into the professional phase of the program is determined by the Medical Technology Admissions Committee.

Professional Curriculum

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Med. T. 400, Special Topics</td>
<td>2</td>
</tr>
<tr>
<td>Med. T. 406, Foundations of Laboratory Practice</td>
<td>2</td>
</tr>
<tr>
<td>Med. T. 450 and 451, Clinical Chemistry I and lab</td>
<td>5</td>
</tr>
<tr>
<td>Med. T. 452, Analysis of Body Fluids</td>
<td>3</td>
</tr>
<tr>
<td>Med. T. 456 and 457, Clinical Chemistry II and lab</td>
<td>5</td>
</tr>
<tr>
<td>Med. T. 459, Applied Clinical Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>Med. T. 460 and 461, Hematology I and lab</td>
<td>3</td>
</tr>
<tr>
<td>Med. T. 462, Hemostasis</td>
<td>3</td>
</tr>
<tr>
<td>Med. T. 466 and 467, Hematology II and lab</td>
<td>4</td>
</tr>
<tr>
<td>Med. T. 469, Applied Hematology</td>
<td>3</td>
</tr>
<tr>
<td>Med. T. 470 and 471, Immunohematology I and lab</td>
<td>4</td>
</tr>
<tr>
<td>Med. T. 476 and 477, Immunohematology II and lab</td>
<td>4</td>
</tr>
<tr>
<td>Med. T. 479, Applied Immunohematology</td>
<td>3</td>
</tr>
<tr>
<td>Med. T. 480 and 483, Clinical Immunology I and lab</td>
<td>2</td>
</tr>
<tr>
<td>Med. T. 489, Applied Clinical Techniques</td>
<td>2</td>
</tr>
<tr>
<td>Med. T. 490 and 491, Clinical Microbiology I and lab</td>
<td>4</td>
</tr>
<tr>
<td>Med. T. 494, Special Topics in Clinical Microbiology</td>
<td>2</td>
</tr>
<tr>
<td>Med. T. 496 and 497, Clinical Microbiology II and lab</td>
<td>4</td>
</tr>
<tr>
<td>Med. T. 498, Applied Clinical Microbiology</td>
<td>3</td>
</tr>
</tbody>
</table>

Other Requirements

Students must purchase laboratory jacke/coat for use during their clinical laboratory assignments and are required to provide their own transportation to the clinical sites. Students are required to purchase professional liability insurance in the amount of not less than $100,000/$300,000. Students must provide evidence of a completed physical examination, including a tuberculin skin test, rubella and rubeola titers, prior to their clinical assignments in the affiliate laboratories.

Lower-Division Courses

160Q, Introduction to the Clinical Laboratory Sciences. (2), 1R, 2L. Division C course/elec-
tive. A study of clinical laboratory disciplines, including hematology, immunohematology, chemistry, microbiology, cytology and histology, through an examination or laboratory testing in each discipline with consideration of the role of the clinical laboratory in the health care system. Course is suitable for majors to explore career selection and nonmajors who come in contact with clinical laboratories either as a health professional or as a consumer.

281. Cooperative Education. (1-6). Provides a field placement that integrates theory with a planned and supervised professional experience designed to complement and enhance the student's academic program. Individualized programs must be formulated in consultation with and approved by appropriate faculty sponsors and the cooperative education coordinators. Repeatable for credit. Prerequisites: basic requirements for admission include successful completion of the freshman year and satisfactory academic standing prior to the first job assignment.

310. Clinical Laboratory Services. (3). 2R; 2L. An overview of the services and information provided by the clinical laboratory. Emphasizes basic procedures and interpretation of data. Prerequisite: Limited to Physician Assistant students in professional program.

Upper-Division Courses

400. Special Topics. (2). A study of the principles and methodologies of laboratory management and supervision and teaching techniques applicable to the clinical laboratory sciences. Prerequisite: departmental consent.

405Q. Medical Immunology. (3). Division C course/elective. An introduction to the study of immunological concepts as they apply to the study, prevention and causation of the disease process. Prerequisite: Biol. 223.

406. Foundations of Laboratory Practices. (2). An introduction to clinical laboratory skills and instrumentation. Includes laboratory safety specimen collection and processing, medical terminology and use and care of the microscope. Prerequisite: departmental consent.

411. Special Topics. (1-6). Supervised intensive study of special topics and problems related to health professions. Repeatable to a maximum of six hours. Prerequisite: department chairperson's consent.

450. Clinical Chemistry I. (3). The study of basic clinical chemistry encompassing the study and application of clinical chemistry calculations and quality control and the study of colorimetric, spectrophotometric and titrimetric principles and techniques on serum plasma and other body fluids. Prerequisites: Chem. 561 and Biol. 223.

451. Clinical Chemistry I Laboratory. (2). 6L. Application of the theory of the procedures and techniques used for colorimetric, spectrophotometric and titrimetric analysis of serum plasma and other body fluids for clinically significant substances.

452. Analysis of Body Fluids. (3). 2R; 1L.

Includes the study of renal physiology, routine urinalysis and renal function tests. Also encompasses the principles and techniques involved in the analysis of cerebrospinal fluid, feces, gastric fluid, synovial fluid, amniotic fluid, ascitic fluid, duodenal fluid, salivary fluids and seminal fluid.

456. Clinical Chemistry II. (3). Includes advanced instrumentation principles and techniques, acid-base balance, advanced enzymology, endocrinology and toxicology. Emphasizes relationships existing between substances of the body and procedural development and evaluation. Prerequisite: Med. T. 450, 451 or departmental approval.

457. Clinical Chemistry II Laboratory. (2). 6L. A laboratory course encompassing the application of the principles of technique appropriate to the evaluation of methodology, acid-base balance, advanced enzyme quantification, endocrinology and toxicology. Prerequisite: Med. T. 450; concurrent enrollment or departmental approval.

459. Applied Clinical Chemistry. (3). Application of clinical chemistry procedures and techniques in the analysis of body fluids in a clinical laboratory setting. Prerequisites: Med. T. 457 and departmental consent. Offered Cr/NCR only.

460. Hematology I. (2). Emphasizes the theory underlying basic procedures performed in the hematology laboratory and the relationship between these procedures and the diagnosis of disease. Prerequisites: Biol. 223 and departmental consent.

461. Hematology I Laboratory. (2). 3L. Emphasizes performance of the basic procedures used in the hematology laboratory, including complete blood counts, normal and abnormal differentials and miscellaneous hematology tests. Prerequisite: Med. T. 460 or concurrent enrollment and/or departmental consent.

462. Hemostasis. (3). 2R; 3L. Examination of the function/dysfunction of the hemostatic system. Prerequisites: BioI. 223 and departmental consent.

466. Hematology II. (3). Emphasizes the clinical significance of laboratory data and its correlation with pathologic conditions. Material covered includes in-depth discussions of anemias and leukemias. Prerequisites: Med. T. 460, 461 and departmental consent.

467. Hematology II Laboratory. (1). 3L. Emphasizes special testing procedures used in the hematology laboratory for diagnosis of anemias and various white cell disorders such as leukemia. Prerequisites: Med. T. 466 or concurrent enrollment and/or departmental consent.

469. Applied Hematology. (3). Application of the theory and technical skills of hematology in a clinical laboratory with experiences in prenatal testing, antibody identification techniques and resolution of serological incompatibilities encountered in blood types, compatibility testing, hemotherapy, hemolytic disease of the newborn, Rh immune globulin and hemolytic anemia. Prerequisite: Med. T. 470 or instructor's consent.

470. Immunohematology I. (3). An introduction to blood banking theory pertinent to assurance of quality transfusion practices in a donor service, including selection, collection, processing and component therapy, and to a transfusion service, including application of immunology and genetics to blood group systems, compatibility testing and clinical correlations related to transfusion reactions and to the prediction, diagnosis and prevention of hemolytic disease of the newborn. Prerequisite: Med. T. 405Q or equivalent or instructor's consent.

471. Immunohematology I Laboratory. (1). 3L. A laboratory course in techniques relevant to performance of a blood bank and transfusion laboratory, such as in a donor or transfusion service. Methodology covered includes blood typing, antibody screening, single antibody identification, compatibility testing, prenatal testing, neonatal testing, Rh immune globulin and quality assurance of immunohematology laboratory procedures. Prerequisites: Med. T. 405Q or equivalent and Med. T. 470 or concurrent enrollment or instructor's consent.

476. Immunohematology II (2). A problem solving, theoretical course in blood banking, covering HLA, disputed paternity, forensic testing, antibody identification techniques and resolution of serological incompatibilities encountered in blood types, compatibility testing, hemotherapy, hemolytic disease of the newborn, Rh immune globulin and hemolytic anemia. Prerequisite: Med. T. 476 or concurrent enrollment or instructor's consent.

477. Immunohematology II Laboratory. (1). 3L. A laboratory course in techniques relevant to resolution of medical-legal cases, antibody identification and problems encountered in blood typing, compatibility testing, hemotherapy, hemolytic disease of the newborn, Rh immune globulin and hemolytic anemia. Prerequisite: Med. T. 476 or concurrent enrollment or instructor's consent.

479. Applied Immunohematology. (3). Application of the theory and technical skill of immunohematology in a clinical laboratory with experiences in prenatal testing, antibody identification, direct antiglobulin evaluation, provision of safe blood or blood components for transfusion and resolution of discrepancies encountered in performing any of the procedures. Offered Cr/NCR only. Prerequisites: Med. T. 467, 477 and departmental consent.

480. Clinical Immunology I. (1). An introduction to serological diagnosis in the clinical laboratory, including rationale of testing, methodologies, comparison of different methods, interpretation of test results and clinical correlations. Prerequisite: Med. T. 405Q or equivalent or instructor's consent.


483. Clinical Immunology I Laboratory. (1). 3L. A laboratory course in techniques relevant to serological diagnosis of the following conditions: syphilis, acute bacterial infections, streptococcal infections, febrile diseases, mycoplasma infections, infectious mononucleosis, rheumatoid arthritis and pregnancy. Prereq
Site: Med. T. 480 or concurrent enrollment or instructor's consent.

490. Clinical Microbiology I. (3). Basic theory covering (a) procedures for specimen processing in the clinical laboratory; (b) normal flora; (c) morphological, cultural and serological characteristics of common pathogenic bacteria; and (d) basic theory in an imicrobic susceptibility testing techniques. Prerequisites: Biol. 330 and concurrent enrollment in Med. T. 491.

491. Clinical Microbiology I Laboratory. (1).
4L Basic procedures for the set up and examination of clinical specimens. Isolation and identification procedures for the more common pathogenic organisms. Use and interpretation of common antimicrobial susceptibility testing procedures. Runs concurrently with Med. T. 490. Prerequisites: Biol. 330, previous or concurrent enrollment in Med. T. 490 and departmental consent.

494. Special Topics in Clinical Microbiology. (2). 2R; 2L. The study of the medically important fungi and parasites emphasizing their identification in the clinical laboratory. Discussion of lifecycles and their relation to the infection/disease process and the epidemiology of these organisms. Prerequisites: Biol. 330 and departmental consent.

496. Clinical Microbiology II. (3). Advanced theory, procedures and rationale for the isolation and identification of the nonfermenters, the anaerobic and unusual aerobic organisms. Discussion of disease processes and identification of the acid-fast bacteria. Introduction to advanced antimicrobial susceptibility testing techniques. Prerequisites: Med. T. 490, 491, 497 or concurrent enrollment.


498. Applied Clinical Microbiology. (3). Application of theoretical and practical aspects of clinical microbiology in a commercial laboratory and operating hospital laboratory. Offered Cr/NCr only. Prerequisites: Med. T. 490 and 497.

Courses for Graduate/Undergraduate Credit

500. Clinical Endocrinology. (3). Describes endocrine hormone functions and the practical application of modern clinical laboratory methods for the diagnosis of functional hormonal disorders. Open to nonmajors in medical technology. Prerequisites: Biol. 223 or equivalent and Chem. 103Q or 111Q or equivalent or instructor's consent. An understanding of biochemistry is recommended.

752. Method Evaluation and Selection. (3). Presents an objective, practical approach to the evaluation of laboratory methodologies. This approach incorporates the use of statistical analysis evaluation of technology and clinical application. Prerequisites: Med. T. 459, 469, 479 and 498, or equivalent, HS 705 or instructor's consent.

760. Hematologic Neoplasms. (3). 3R. Deals with the etiology, pathophysiology and morphology of hematologic neoplasms and the health care practitioners' interactions with persons with those disorders.

765. Advanced Clinical Hemostasis. (3). Advanced studies in the mechanisms of hemostasis, pathological changes that can occur in the hemostatic mechanism and the laboratory evaluation of those changes. Prerequisite: Med. T. 462 or instructor's consent.

775. Advanced Clinical Pathophysiology. (3). Advanced studies in the mechanisms of the disease process and pathological changes that can occur in various pathophysiological states. Prerequisites: HS 400 or 15 hours of biology or instructor's consent.

780. Issues in Immunohematology. (3). 3R. In-depth analysis of current issues in a modern transfusion service emphasizing responding to changes in patient care through application in technology, research and supervision. Prerequisites: Med. T. 479 and HS 701 or instructor's consent.

790. Epidemiology and Infection Control. (3). 3R. A study of the expanding role of hospital personnel in the performance of hospital epidemiology and infection control. Addresses basic epidemiological principles, basic considerations of hospital infections including investigations and surveillance, potential problems within the hospital environment, the role of the hospital laboratory and preventive measures against epidemic and endemic infections. Prerequisites: course in medical microbiology or instructor's consent.

800. Seminar in Laboratory Science. (1). Discusses recent issues and advances in the field of clinical laboratory science, including the areas of microbiology, chemistry, hematology, immunology and immunohematology. Students are responsible for assigned topics, using current journal articles as resource material. Prerequisite: departmental consent.

890. Thesis. (1-3). Repeatable to a maximum of six hours. Prerequisite: consent of thesis adviser.

Bachelor of Science in Nursing

The Bachelor of Science in Nursing program is designed to prepare students for the practice of professional nursing. The graduate is prepared for beginning positions in nursing in any health care delivery system and for further study at the master and doctoral levels and for advancement to nursing positions of increasing responsibility and leadership.

Students are admitted to the Department of Nursing at the junior year after completing 60-64 hours of course work. Persons interested in the Bachelor of Science in Nursing may direct inquiries to: Chairperson, Department of Nursing, The Wichita State University, Wichita, Kansas 67208-1595.

Preprofessional Curriculum

Students applying for admission to the Department of Nursing must have completed the following courses. Students should consider taking 16 hours per semester or attending Summer Session.

Course Hrs. Basic Skills (12 hours)
Math. 109, 111, 112 or 211..................................3
Engl. 101, College English I.................................3
Engl. 102, College English II...............................3
Comm. 111, Public Speaking................................3

Division A—Humanities and Fine Arts
(9 hours)
Phil. 100G, The Meaning of Philosophy................3
Six hours in two other departments (excluding performance and studio arts)

Division B—Social and Behavioral Sciences
(12 hours)
Psy. 111Q, General Psychology..............................3
Psy. 334Q, Developmental Psychology....................3
Soc. 111Q, Introduction to Sociology......................3
One elective in any department in Division B............3

Division C—Natural Sciences and Mathematics (24 hours)
Biol. 120Q, Introduction to Microbiology................3
Biol. 223, Human Anatomy and Physiology..................
Chem. 103Q, General Chemistry, or Chem. 111Q, General Chemistry ......5
HS 331Q, Principles of Dietetics and Nutrition.............3
HS 301, Clinical Pharmacology..............................3
Three-hour course in statistics with Department of Nursing approval**
Electives (3-10 hours)*
Admission to Department of Nursing

Students who have satisfactorily completed two semesters of lower-division courses may request an application form from the Department of Nursing. Application forms for fall semester admission are requested by February 1; for spring semester admission, by September 1. To qualify as a candidate for admission to the Department of Nursing, students must:

1. Be enrolled in, or admitted to, the Wichita State University
2. Have completed, or have plans to complete, the lower division requirements
3. Have an overall grade point average of at least 2.500 in all courses completed and no grade lower than a C in any of the specified required courses
4. Submit an application including expected semester of enrollment.

Registered nurse students, in addition to the above requirements, must:
1. Submit a photocopy of current license to practice as a registered nurse in Kansas
2. Submit official transcripts of college courses and records from the school of nursing.

Registered nurse students who have met these requirements may obtain information from the Department of Nursing regarding enrollment in the transition course. Nurs. 334, Dimensions of Professional Nursing, and Advanced Standing Examinations by which they may validate nursing credits at the upper-division level.

Professional Curriculum

The following courses in the Department of Nursing are required for the Bachelor of Science in nursing. A total of 124 hours of University credit is required for graduation.

Course                  Hrs.
Phase I
Nurs. 327, Nursing as a Practice ... 2
Discipline
Nurs. 330, Technologies Related to the Adult ... 2
Nurs. 332Q, Health Promotion and Self-Care ... 2

Other Requirements

Uniforms are required for all clinical laboratory experiences. Students are required to provide their own transportation to and from health care agencies used for these experiences. Lab fees may be assessed. Students are required to purchase professional liability insurance in the amount of $1 million per single claim/$3 million aggregate per year. The insurance must be renewed annually. Students must provide evidence of personal health insurance and evidence of a completed physical examination prior to clinical laboratory experiences each academic year. Additional costs for instructional materials, testing, lab experiences, etc., may be required throughout the program. CPR certification is required. Information related to these requirements is available from the Department of Nursing.

Upper-Division Courses

327. Nursing as a Practice Discipline. (2). An introduction to the study of nursing within the self-care framework and its use in nursing practice, education, theory, and research. The student examines perceptions of the nurse and nursing student, and nursing as a practice discipline. Prerequisite: admission to the department of nursing or departmental consent.
330. Technologies Related to the Adult. (2). Develops psychomotor and interpersonal skills of nursing care for the adult. Emphasizes the scientific rationale for performance of technologies in a humane manner. Prerequisite: admission to the department of nursing.
332Q. Health Promotion and Self-Care. (2). Division C course/elective. Studies self-care (health) practices and health state of individuals within ranges of wellness. Emphasizes the determinants which influence how universal self-care requisites are met. Open to non-nursing majors. Prerequisites: Engl. 101 and 102.
334. Dimensions of Professional Nursing. (3). Introduces registered nurse students to the study of nursing as a practice discipline and professional nursing roles. Emphasizes the self-care concept of nursing and its use in professional practice, education, and scholarship. Prerequisite: admission to department or departmental consent.
336. Design of Nursing Systems. (5). JR. 6L. The study of knowledge, attitudes, and skills for the design, implementation, and evaluation of nursing systems for individuals. Studies methods of assistance and types of nursing systems. Prerequisite: admission to department. Prerequisites or corequisites: enrollment in Nurs. 327 and 332Q.
342. Assessment of Children and Aging Adults. (3). 3L. Develops skills in performing biopsychosocial health assessments of children and aging adults. Emphasizes assessment of health status through differentiating between variations of normal and abnormal. Designed to be completed by independent study. Prerequisite: open to RN students only. Nurs. 340 may be taken concurrently or as a prerequisite.
350. Workshops in Nursing. (1-4). Intensive study of special topics related to nursing practice, education, or research. Open to non-majors.
352H. Nursing Practice I, Honors. (3). 9L. Clinical course; provides the student opportunity to design and control nursing systems for adults with organic disorders, focusing on educational supportive and partly and wholly compensatory nursing systems appropriate for adult client(s)/patient(s) demonstrating major health problems in contemporary society. Prerequisites: Phase I courses. Corequisites: Nurs. 340 and 347.


464. Nursing Systems: Aging Families. (3). 2R; 9L. Clinical course; examines the nursing needs of individuals in small groups that have various health problems requiring surgery. Focus is the expansion of the nursing student's power to perform deliberate actions for the benefit and well-being of others in all phases of the surgical process (before, during and after). Major emphasis is in the nursing student's acquisition of clinical management skills in all phases of the surgical process. Prerequisites: Nurs. 340, 347, 351 and 354. Corequisites: Nurs. 465 and 466.


543. Women and Health Care. (3). Cross-listed as Wom. S. 543. Examines the historical development of the women's health movement, focuses on current issues relevant to women and health care and explores the roles of women in the health care system and as consumers of health care. Examines self-care practices of women and studies ways to promote positive health practices. Open to nonnursing majors.

700. Assessment of Pediatric and Adolescent Clients. (3; 2R; 3L). A theoretical and clinical laboratory experience; students focus on the assessment of pediatric and adolescent clients. Open to RN and graduate students.

703. Foundations of Nursing. (3). Focuses on the nature of theory and the process of theory development. Traces the historical development of nursing theory and explores projections for the future. Analyzes selected conceptual models of nursing in terms of implications for nursing practice, nursing research and nursing education. Prerequisites: admission to Graduate School.

704. Health Maintenance of the School Age Child. (3; 2R; 3L). Examines and applies major theories, clinical concepts and research studies related to school health nursing. Open to RN and graduate students.

705. Nursing Research. (3). Building on an initial research experience, course assists the student in understanding premises which govern research design, implementation and evaluation. Considers current issues in nursing research, the researcher, the populations studied and the consumer of research. Prerequisites: statistics course accepted by the Department of Nursing, an undergraduate research course and admission to Graduate School.

706. Organization and Management of the School-Health Program. (3; 2R; 3L). Examines and applies concepts of organization and management to the school-health delivery system. Explores political, economic and social factors which influence the school-health delivery system. Open to RN and graduate students.

708. School Nurse Practicum. (2; 6L). An intensive clinical experience; students analyze, design, implement and evaluate nursing systems to promote the health of individuals in the school-health delivery system and the broader community system. Open to RN and graduate students.

711. Issues in Nursing. (3). Analyzes various issues in professional nursing. Focuses on issues ranging from concerns within the local practice setting to rational policy issues. Examines theories uniquely suited to policy formation in health care systems. Prerequisite: admission to Graduate School.

721. Epidemiology: A Data-Based Method for Decision-Makers. (3). Introduces the basic epidemiologic approach used to assess and make decisions about the health of the community. Prepares students to use this methodology in the planning, delivery and evaluation of health services as they work with consumers and providers of health care and public services in the community. Prerequisite: graduate standing or instructor's consent. Nurs. 841 is prerequisite for community only.

733. Diabetes Mellitus Nursing. (3). Exploration of clinical theories; identifies and studies appropriate nursing systems for clients with diabetes mellitus. Emphasizes attaining and maintaining optimal levels of functioning and the psychological adjustment of the client and family to a potentially devastating disease.

734. Diabetes Mellitus Nursing Practicum. (3). An intensive clinical experience; the student studies, designs and implements nursing systems for individuals or groups in the area of diabetes mellitus nursing management. A weekly one hour seminar accompanies the practicum.

750. Workshops in Nursing. (1-4). An opportunity for intensive study of special topics related to nursing practice, education or research. Open to nonmajors.

757. Clinical Teaching Strategies. (3). An exploration of alternative teaching strategies for the clinical educator to accommodate the changing health care scene. Discusses clinical teaching methods. A clinical rotation plan with accompanying clinical evaluation tool is constructed after the student, subject and setting are delineated. Investigates roles of the educator in teaching clinically.

791. Special Studies in Nursing. (1-6). Students engage in extensive study of particular content and skills directly or indirectly related to nursing practice. Repeatable. Prerequisites: admission to Graduate School and departmental consent.

796. Nursing Practicum in Special Settings. (3). Assists the student in acquiring theoretical knowledge of organizations. Considers current issues and research in nursing administration and impact on nursing practice. Prerequisite: departmental consent prior to registration. Prerequisites or corequisites: Nurs. 703, 705 and 711.

812. Nursing Administration Practicum. (3). Practicum in a nursing administration setting; student, under professional guidance, becomes directly involved. A seminar accompanies the field experience. Types of experience may include roles in nursing education or service, mid-level nursing administration, staff development or community health. May be repeated twice. Prerequisite: Nrs. 811 or 827 or concurrent enrollment.

813. Foundations of Nursing Education. (3). Assists the student to explore theoretical and practical aspects of curriculum development and teaching of nursing in higher education and continuing education. Prerequisite: departmental consent. Prerequisites or corequisites: Nurs. 705, 708 and 711.

814. Nursing Education Practicum. (3 or 6). Student, under professional guidance becomes directly involved in clinical and classroom teaching, curriculum development and participation other faculty functions in higher education and continuing education. A seminar accompanies the field experience. Prerequisites: departmental consent and Nurs. 813.


823. Graduate Project: Alternative to Thesis. (1-3). Graded S/U only. Student in conjunction with the academic advisor and a three-member thesis committee, designs and conducts a formal research project. Prerequisites: admission to Graduate School and departmental consent prior to registration.

822. Psychiatric/Mental Health Nursing Practicum I. (3). Intensive clinical experience; student plans, implements and evaluates nurse-patient strategies with individual clients/patients. A seminar accompanies the practicum. Prerequisite or corequisite: Nurs. 819.

825. Independent Study. (1-6). Provides...
opportunity for the student to develop, in collaboration with a departmental faculty member, objectives and protocol for independent work related to the practice of nursing. Prerequisites: admission to Graduate School and departmental consent.

827. Resource Management in Nursing. (3). Focuses on the assessment of human and material resources and information systems needed to manage nursing care delivery. Emphasizes Nursing Personnel Management, patient classification systems, costing out of nursing services, strategic planning and marketing. Prerequisites: Nurs. 703, 705 and 711.

829. Foundations of Maternal-Child Nursing. (3). Provides the foundation for all courses in the maternal-child clinical concentration. Seminars enable students to investigate major theories, clinical concepts and research studies related to maternal-child nursing. Prerequisites: Nurs. 703, 705 and 711.

832. Maternal-Child Nursing: Practicum I. (3). An intensive clinical experience; student focuses on the process of systematic assessment of individuals and groups within a family system. A seminar accompanies the practicum. Prerequisite or corequisite: Nurs. 829.

833. Adult Nursing I. (3). Examines clinical concepts and issues related to the maintenance of optimal health states of adults. Emphasizes assessment, measurement and nursing interventions related to these concepts. Prerequisites: Nurs. 703, 705 and 711.

834. Adult Nursing Practicum. (3 or 6). An intensive clinical experience; student designs, implements and evaluates nursing care for adults. Selects specialized areas of study; may include health maintenance or illness care of acutely or chronically ill adults. Practicum sites may include hospitals, extended care facilities, rehabilitation centers, community health agencies. A seminar is part of the practicum. Prerequisites: Nurs. 703, 705, 711 or instructor's consent; Nurs. 833 or 839 may be concurrent.

835. Perspectives in Maternal-Child Nursing. (3). Critically examines health care delivery systems for maternal and child health. Analyzes the effects of political, economic and social factors on maternal and child health. Examines nursing roles in the delivery of maternal and child health care. Prerequisites: Nurs. 703, 705, 711 and 829.

836. Maternal-Child Nursing: Practicum II. (3). An intensive clinical experience; student analyzes, designs, implements and evaluates nursing systems for individuals and groups within a family system. Prerequisites: Nurs. 703, 705, 711, 829 and 832. Nurs. 835 may be concurrent.

837. Perspectives in Gerontological Nursing. (3). Emphasizes the synthesis of concepts and theories into a functional theoretical framework for geriatric nursing. This basis is utilized to identify health problems of older adults and to plan appropriate preventive, rehabilitative or restorative approaches to those problems. Attention on social, economic, political, ethical and legal aspects as they impinge upon the well-being of older adults. Prerequisites: Nurs. 833 and 834 or instructor's consent.

839. Adult Nursing II. (3). Examines clinical concepts and issues related to major disruptions in the health status of adults. Emphasizes assessment, measurement, and interventions related to these concepts. Prerequisites: Nurs. 703, 705 and 711.

841. Foundation of Community Health Nursing. (3). As the health care system broadens its base to community settings, an appraisal of historical development, trends and issues related to community health nursing is investigated. Analyzes conceptual models and theories as related to nursing practice and research in the community. Prerequisite: Nurs. 703, 705, 711.


845. Seminar in Nursing Administration. (3). An in-depth study and analysis of the roles of nurse managers in various health care settings. Discusses special problems, current topics and issues in nursing administration. Prerequisites: Nurs. 811 or 827 and at least 3 hours of Nurs. 812.

School Nurse

The following curriculum plan is recommended for registered nurses who desire school nurse certification but who do not wish to pursue a degree.

In the College of Education, students must take three courses: CI 428, Social and Cultural Foundations of Education (two hours), or CI 701, Foundations of Education (three hours); CI 601, Introduction to Exceptional Child (three hours); and CI 490 or 890, Independent Study (one hour).

In addition, students must take courses in the Department of Nursing: Nurs. 700, Assessment of Pediatric and Adolescent Clients (three hours), or an equivalent course determined by the Department of Nursing; Nurs. 704, Health Maintenance of the School Age Child (three hours); Nurs. 706, Organization and Management of the School Health Program (three hours); and Nurs. 708, School Nurse Practicum (two hours), optional.

The total program requires 17-18 credit hours.

Family Nurse Practitioner

A family nurse practitioner major will be offered beginning Fall, 1992, as part of the graduate program. This major will emphasize rural health care delivery and includes extensive clinical experiences in rural areas. Certificate and Master of Science Degree options are available for the registered nurse with a BSN.

Physical Therapy

Department of Physical Therapy

Because physical therapy is an entry point into the health care system for many individuals, the Physical Therapy Department at The Wichita State University develops professional people who can meet this responsibility and provide leadership inside and outside the profession. The Master of Physical therapy degree will allow the student to achieve a foundation in liberal arts and sciences as well as gain an education in the profession of physical therapy. The graduates will have the skills and knowledge base to assist them in influencing the quality of physical therapy care, the profession of physical therapy, and health care in the local community and beyond.

Master of Physical Therapy

The program prepares individuals to enter beginning practice as a physical therapist. The graduates are prepared to evaluate neuromuscular, musculoskeletal, sensorimotor and related functions to determine the degree of muscle strength, motor development, motion, respiratory ventilation or peripheral circulatory efficiency of individuals. Following referrals from physicians, dentists, or podiatrists, the physical therapist plans and implements appropriate treatment programs for disabled individuals with disabilities. Graduates are prepared to work in preventive health care, health maintenance, the prevention of function disability, and restorative care. The program requires full-time study for a period of twenty-four consecutive months. Students enter the program in the fall semester only. Applications to the program should be made between September 1 and March 1 for entry in the subsequent fall semester.

Admission Requirements

Admission to the program requires that the student:
1. Have a bachelor's degree from an
accredited four-year institution acceptable to the Graduate School;

2. Have a cumulative grade point average of 3.000 in each of the following: in all prerequisite courses; in the last 60 hours of undergraduate course work; and in all required math and science courses;

3. Show evidence of completing the following:
   Biology—two semesters of introductory biology (which would lead to a biology major) with a laboratory
   Anatomy and Physiology—8-10 semester hours
   College Chemistry—two semesters with laboratory in courses which lead to a chemistry major
   College Physics—two semesters with laboratory
   English Composition—two semesters
   Mathematics—college algebra, probability and statistics
   Social Sciences—psychology, sociology, plus an additional 12 hours in social science
   *Humanities—ethics, plus an additional 12 hours in humanities

4. Twenty hours of documented observational experience.

*No more than six hours in any area

To be reviewed for admission, applicants should do the following:

1. Request in writing an application packet from the Department of Physical Therapy and the Graduate School.

2. Submit the designated Application for Admission and supporting transcripts to the Graduate School.

3. Submit the designated Physical Therapy Application, along with all requested materials to the Department of Physical Therapy after September 1 and before March 1, for the following fall admission.

Applications will be reviewed anytime after September 1 for the next fall admission. Applicants will be notified of their admission status by the Graduate School. Applications will be reviewed when all materials have been submitted. Once an applicant has been admitted, he or she will be asked to submit a $100 nonrefundable tuition deposit to guarantee a space for the fall. Once the student enrolls, this money will be used toward payment of all tuition fees.

Degree Requirements

The student must maintain a 3.000 grade point average and a C or better in each of the following courses:

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<tr>
<th>Course</th>
<th>Hrs</th>
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<td>First Year</td>
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<td>Fall</td>
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<tr>
<td>HS 700, Gross Anatomy</td>
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<tr>
<td>PT 705, Clinical Medicine I</td>
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<tr>
<td>PT 710, Principles of Physical Therapy I</td>
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<td>PT 712, Research I</td>
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<td>Spring</td>
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<td>PT 820, Physical Therapy Management</td>
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<td>PT 835, Physical Therapy Theory and Procedures</td>
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<tr>
<td>PT 840, Independent Study</td>
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<td>Second Year</td>
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<td>Fall</td>
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<tr>
<td>PT 810, Principles of Physical Therapy III</td>
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<td>PT 815, Physical Therapy Management I</td>
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<td>PT 826, Clinical Medicine III</td>
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<td>PT 835, Physical Therapy Theory and Procedures</td>
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<td>PT 840, Independent Study</td>
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<td>PT 845, Seminar III</td>
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<td>PT 850, Clinical Education II</td>
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<td>Summer</td>
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<td>PT 860, Clinical Education III</td>
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<td>PT 870, Clinical Education IV</td>
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Special Requirements

Students will be required to purchase uniforms and other clinical apparel, professional liability insurance, health insurance coverage and specified immunizations as well as submit evidence of an annual physical examination while in the program. Students must also be certified in cardiopulmonary resuscitation (CPR) prior to entering the clinical rotations.

Students are expected to provide their own transportation to and from the health care facilities used for clinical experiences. During clinical assignments outside Wichita, students may be required to pay all living and travel expenses.

Students are referred to the Department of Physical Therapy Student Handbook for more details on special departmental policies and procedures.

Courses for Graduate/Undergraduate Credit


710. Principles of Physical Therapy I. (5). 3R; 6L. Development of ability to differentiate causes of musculoskeletal problems and development of basic treatment programs using scientific rationale for treatment selection. Prerequisite: departmental consent.

712. Research I. (1). 1R. Discussion and application of principles of critiquing scientific literature. Prerequisite: departmental consent.

715. Seminar I. (1). 1R. Discussion of information from readings and other sources regarding the profession, settings for health care delivery, professionalism and psychosocial aspects of health care. Prerequisite: departmental consent.

722. Research II. (1). 1R. Continuation of PT 712; development of the research proposal. Prerequisite: PT 712.


730. Principles of Physical Therapy II. (5) 3R; 6L. Continuation of PT 710, adding advanced concepts and techniques to differentiate causes of musculoskeletal problems and to develop treatment programs using scientific rationale for selection of programs. Prerequisite: departmental consent.


Courses for Graduate Students Only

800. Clinical Education I. (6) 40P. Introduction to physical therapy care in varied settings requiring communication and interpersonal relationship skills; application of basic physical therapy procedures; beginning professional socialization; beginning development of a generalist in physical therapy. Prerequisite: departmental consent.
810. Principles of Physical Therapy III. (4). 2R; 6L. Correlation of previous course materials and the use of scientific rationale to develop physical therapy evaluations and treatments for patients with specific orthopedic medical diagnoses. Also discusses prevention of musculoskeletal problems and utilization of appliances. Prerequisite: departmental consent.

815. Physical Therapy Management I. (3). 3R. Study of payment systems, legal aspects of physical therapy, assurance of quality physical therapy care. Includes peer review, documentation, legal and ethical aspects, fiscal considerations, marketing, communication with the public, private sector and government officials. Prerequisite: departmental consent.

820. Physical Therapy Management II. (2). 2R. Study of management systems including assessment, planning, organization, control and evaluation methods. Includes personnel management, fiscal considerations, electronic device utilization and management styles. Prerequisite: departmental consent.

825. Education in Physical Therapy. (1). 1R. Discussion of teaching and learning theories as they apply to physical therapy education of patients, students, health professionals and community. Includes methods of evaluating instruction, content, strategies and learners. Prerequisite: departmental consent.

826. Clinical Medicine III. (2). 2R. Continuation of PT 726. Prerequisite: PT 726.

830. Principles of Physical Therapy IV. (3). 2R; 2L. Integration of physical therapy modalities and program planning previously presented in the curriculum to develop and to evaluate specialty services in physical therapy including arthritis, diabetes, burns and ostetrics-gynecology; developmental investigation of clinical protocols to screen well babies, work situations for injury prevention and children for scoliosis. Prerequisite: departmental consent.

835. Physical Therapy Theory and Procedures II. (4) 3R; 2L. Development of physical therapy evaluations and treatment programs for cardiopulmonary, neurologic and other long-term rehabilitation patients. Assistive devices, home evaluations and problems with architectural barriers are incorporated into discharge planning. Prerequisite: departmental consent.

840. Independent Study. (1). Individual study with objectives developed in collaboration with a departmental faculty member. Repeatable for credit with departmental consent. Prerequisite: departmental consent.

845. Seminar III. (1). 1R. Discussion of information from readings and other sources regarding employment, psychosocial and international aspects of physical therapy. Prerequisite: departmental consent.

850. Clinical Education II.* (6). 40P. First in a series of three courses offering continued development of clinical management of patients in varied clinical settings. Includes managerial aspects of care, teaching and some opportunities for clinical research. Prerequisite: departmental consent.


890. Thesis. (1-6). Repeatable to a maximum of six hours. Prerequisites: enrollment in graduate studies and consent of thesis adviser.

"In the series of three clinical courses, students experience four different settings including general and rehabilitation practices and a selected area of specialization—pediatrics, geriatrics, orthopedics, home health. The order of the settings is flexible. There is a gradual increase in the level of expectations in performance which is guided by the evaluation process.

Physician Assistant

Department of Physician Assistant

Physician assistants (PAs) are professional members of the health care team who, working with physicians, provide diagnostic and therapeutic patient care in virtually all medical specialties and settings.

PAs take medical histories, perform physical examinations and order laboratory tests. After diagnosing a problem, the PA develops and implements a treatment plan. When appropriate, the PA consults with the supervising physician and other health professionals.

Students successfully completing the 24-month physician assistant professional curriculum who meet all University and college requirements will receive the Bachelor of Science—Physician Assistant degree. Graduates of the program are eligible to take the examination given by the National Commission on Certification of Physician Assistants. Passage of this examination is required by many states (including Kansas) for physician assistant practice. The Wichita State University Physician Assistant Program is fully accredited by the American Medical Association’s Committee on Allied Health Education and Accreditation.

Preprofessional Curriculum

The Department of Physician Assistant maintains the philosophy that persons with varied backgrounds can be successful physician assistant students. Prior health care experience is not required, but is preferred. Interested persons should contact the department for clarification and help in completing the prerequisites for consideration of admission to the program. The Department of Physician Assistant curriculum builds on a foundation of liberal arts and sciences.

Course work taken longer than 10 years ago will be subject to departmental review. Students may be required to repeat certain prerequisite courses.

1. Applicants with a bachelor’s degree in a health profession or biology are considered to have met the prerequisites for the physician assistant professional curriculum. Those persons with an associate degree should consult a member of the department’s faculty to determine if the preprofessional requirements for admission to the program and for the Bachelor of Science degree have been met.

2. For any person holding a bachelor’s degree with a major not in the areas listed above, the following are required:
   a. Biol. 203Q (5 hours), Biol. 120Q (4 hours), Biol. 223 (5 hours)
   b. Chem. 111Q (5 hours), Chem. 112Q (5 hours)

3. For all others, the following must be completed:
   a. The GEC requirements
   b. Biol. 203Q (5 hours), Biol. 120Q (4 hours), Biol. 223 (5 hours)
   c. Chem. 111Q (5 hours), Chem. 112Q (5 hours)
   d. A total of 60 semester hours of college credit

Additional requirements:
1. An overall college grade point average of 2.500/4.000
2. A grade of C or better in all Division C courses
3. A personal interview

Health care experience is not required, but is preferred. Requests for exceptions to the above will be considered on an individual basis.

Course

Hrs.

Basic Skills (12 hours)
Engl. 101, College English I .................3
Engl. 102, College English II .....................3
Comm. 111, Public Speaking ....................3
Math. 111, College Algebra (or equivalent) ......3

Division A—Humanities and Fine Arts (9 hours in at least three departments)
Division C—Natural Sciences and Mathematics. Must include:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biol. 223, Human Anatomy and Physiology</td>
<td>5</td>
</tr>
<tr>
<td>Biol. 203Q, Organismal Biology</td>
<td>5</td>
</tr>
<tr>
<td>Biol. 120Q, Microbiology</td>
<td>4</td>
</tr>
<tr>
<td>Chem. 111Q, General Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>Chem. 110Q, General and Inorganic Chemistry</td>
<td>5</td>
</tr>
</tbody>
</table>

Electives—Nine hours of any “G” or “Q” courses. (All course work must be designated “G” or “Q” courses. Nine hours must be taken in General Studies [“G”] courses. No more than six hours may be counted in any department. No courses can be counted in the students’ major department.)

NOTE: “G” courses are the most comprehensive and serve as an overview for students not majoring in the field. “Q” courses serve majors and nonmajors. They tend to be more specialized and often are foundation courses.

General Information for Admission to Professional Curriculum

Students entering the physician assistant professional course of study are required to purchase malpractice insurance in an amount set by the State of Kansas. Students are also required to purchase all the diagnostic equipment needed for use during the two-year course of study as well as the required articles of dress.

Applications for the Physician Assistant Program are obtained from the department. Applicants should be aware that admission to the University is not admission to the Physician Assistant Program.

Selection for admission to the physician assistant professional curriculum is based on many subjective and objective factors. Each applicant is evaluated in terms of academic performance, health care experience, references, communication skills and so forth. An interview is required as part of the selection process.

Professional Curriculum

The physician assistant program curriculum consists of both classroom and clinical courses. Clinical courses are taught by physicians, physician assistants and other health care professionals in locations throughout the state.

Once admitted, students must take the following courses to meet the physician assistant professional requirements. Professional courses are available only to students in the program.

<table>
<thead>
<tr>
<th>Professional Curriculum (all courses are required)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course</td>
</tr>
<tr>
<td>Junior Year</td>
</tr>
<tr>
<td>Fall</td>
</tr>
<tr>
<td>HS 388, Clinical Anatomy I</td>
</tr>
<tr>
<td>HS 390, Clinical Physiology</td>
</tr>
<tr>
<td>HS 421, Applied Clinical Pharmacology I</td>
</tr>
<tr>
<td>Med. T. 310, Clinical Laboratory</td>
</tr>
<tr>
<td>PA 300, Medical History and Physical Examination</td>
</tr>
<tr>
<td>PA 516, Assessment and Management of the Integument</td>
</tr>
<tr>
<td>PA 320, Assessment and Management of the EENT Systems</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

Spring

PA 302, Patient Counseling                        | 2    |
| HS 400, Introduction to Pathophysiology           | 3    |
| HS 422, Applied Clinical Pharmacology II          | 3    |
| PA 317, Assessment and Management of Endocrine System| 1    |
| PA 323, Assessment and Management of the Cardiopulmonary Systems| 3 |
| PA 330, Assessment and Management of Gastrointestinal System| 3 |
| PA 333, Assessment and Management of Obstetrics and Gynecology| 3 |
| PA 335, Assessment and Management of the Renal and Genito-Urinary Systems | 3 |
| Total                                             | 21   |

Summer

PA 337, Assessment and Management of the Neuromuscular Systems| 3 |
| PA 375, Clinical Skills                            | 3    |
| PA 430, Clinical Conference I                      | 1    |
| Total                                             | 7    |

Fall

PA 410, Clinical Rotation I                        | 3    |
| PA 412, Clinical Rotation II                       | 3    |
| PA 414, Clinical Rotation III                      | 3    |
| PA 418, Clinical Rotation IV                       | 3    |
| Total                                             | 12   |

Spring

PA 419, Clinical Rotation V                        | 3    |
| PA 422, Clinical Rotation VI                       | 3    |
| PA 425, Clinical Rotation VII                      | 3    |
| PA 432, Clinical Conference II                     | 3    |
| Total                                             | 12   |

Upper-Division Courses

300. Medical History and Physical Examination. (4). 3R; 2L. Provides the theoretical and practical knowledge that can be utilized to obtain an appropriate medical history and/or conduct a proper physical examination (complete/segment). Also focuses on the identification of normal and abnormal physical findings. Practice of methods and techniques learned in the course take place in a faculty-proctored laboratory setting. Prerequisite: admission to PA professional program.
Pre-SJU.

SjU.

SjU.

encompasses the therapeutic administration for the education of respiratory therapists. Following completion of the program, assists in diagnosis, monitoring, treatment and research, including measurement of respiratory volumes, pressure and flows and blood gas analysis. Specific testing techniques are employed in this course. Prerequisite: admission to PA professional curriculum.

316. Assessment and Management of the Integument. (1). Deals with the integument system. Includes diseases of the skin, hair and nails. Specific emphasis on the selection of therapeutic regimens and their indications, availability, reliability and limitations. Graded S/U. Prerequisites: admission to PA professional program.

317. Assessment and Management of the Endocrine System. (1). Deals with the endocrine system. Includes diseases of the pituitary gland and hypothalamus, diseases of the thyroid, parathyroid and adrenal glands; diabetes mellitus diagnostic procedures, special diets; endocrine emergencies and the treatment of endocrine diseases. Prerequisite: admission to PA professional curriculum.

320. Assessment and Management of Ophthalmic and Otorhinolaryngological Problems. (3). Deals with the pathophysiology of the eye, ear, nose and throat. Special emphasis on etiology, diagnosis and treatment of ophthalmic and otorhinolaryngological (ENT) problems. Includes tumors of the eye, nose, throat and ear; audiometry and ophthalmic manifestations of systemic diseases. Prerequisite: admission to PA professional curriculum.

335. Assessment and Management of the Renal and Genito-Urinary Systems. (3). Deals with the kidneys, ureters, bladder and prostate. Includes electrolyte and fluid balances, hypertension, tumors of the genito-urinary (GU) system, infectious diseases, trauma, calculi and special diagnostic procedures. Examines common venereal diseases emphasizing management, treatment and epidemiology. Prerequisite admission to PA professional curriculum.

337. Assessment and Management of the Neuro-Musculo-Skeletal Systems. (3). Special emphasis on the recognition, evaluation and management of neuro-musculo-skeletal diseases and injuries in primary care, emergency and inpatient settings. Prerequisite: admission to PA professional curriculum.

375. Clinical Skills I. (3). 1R; 4L. Graded S/U. A combined theory, laboratory and clinical experience; students apply their knowledge to the care of patients. Includes the physical examination emphasizing applied anatomy and physiology basic to understanding the examination with examples of normalities and abnormalities; medical terminology, evaluation of patients; patient rapport and professional conduct. Lecture, simulation and clinical application are employed in this course. Prerequisite: admission to PA professional curriculum.

401. Clinical Rotation I. (3). A six-week clinical experience; students participate in the care of patients in a variety of medical settings and specialties. Particular emphasis on orientation to medical practice-setting and obtaining and recording a complete and/or problem-oriented medical history. Students obtain and record complete and/or problem-oriented physical examination data, become familiar with common diagnostic procedures and are involved in the selection of therapeutic regimens. Students are, at the discretion of the preceptor, included in all aspects of health care services offered at the site. Graded S/U. Prerequisites: admission to PA professional program and faculty approval.

412. Clinical Rotation II. (3). See PA 410. Particular emphasis on obtaining and recording complete and/or problem-oriented physical examination data. Graded S/U.


419. Clinical Rotation V. (3). See PA 410. Particular emphasis on the art of medicine and gaining the confidence of the patient and family. Graded S/U.

422. Clinical Rotation VI. (3). See PA 410. Particular emphasis on recognizing the signs and symptoms of uncommon illnesses. Graded S/U.

425. Clinical Rotation VII. (3). See PA 410. Particular emphasis on integrating the skills and knowledge obtained in previous rotations, as well as health promotion, disease prevention and patient education. Graded S/U.

430. Clinical Conference I. (1). 1R; 2L. Major focus is the synthesis of didactic and clinical education and training as it applies to primary health care delivery. Students integrate didactic, clinical and research activities emphasizing problem solving, critical thinking and practical application. Evaluation is toward self directed analysis by the student to identify clinical weaknesses and strengths. Graded S/U. Prerequisite: students in PA professional program.

432. Clinical Conference II. (3). 1R; 3L. Spring semester only; for clinical physician assistant students. Primary focus is issues affecting the graduate physician assistant, which include legislative issues, professional associations and responsibilities, practice limitations, malpractice issues and the law. Specific emphasis on the National Board Examination utilizing lecture, demonstration and computer-assisted instruction. Prerequisites: admission to PA professional curriculum.

440. Clinical Preceptorship. (6). Eight-week course culmination of the student's clinical training. Students are placed with a primary care physician to enable them to function as members of the health-care team in a setting similar to that which would be encountered by the graduate physician assistant. Graded S/U.


Respiratory Therapy

Department of Clinical Sciences

Respiratory therapy is an allied health specialty employed in the treatment, management, control and care of patients with deficiencies and abnormalities associated with the cardiopulmonary system. It encompasses the therapeutic administration of medical gases; air and oxygen administering apparatus; environmental control systems; humidification and aerosols; inhaled drugs and medications; mechanical ventilatory assistance and ventilatory control; postural drainage; chest physiotherapy and breathing exercise cardiopulmonary rehabilitation; assistance with cardiopulmonary resuscitation; and maintenance of natural and artificial airways. Specific testing techniques are employed in respiratory therapy to assist in diagnosis, monitoring, treatment and research, including measurement of ventilatory volumes, pressure and flows and blood gas analysis.

The Respiratory Therapy Program is fully accredited by the Committee on Allied Health Education and Accreditation for the education of respiratory therapists. Following completion of the pro-
fessional program, students meet the educational requirements for examination by the National Board for Respiratory Care which leads to the Registered Respiratory Therapist (RRT) credential.

The Bachelor of Health Science degree is available to respiratory therapy students who seek to expand their roles in education and administration. Students interested in more information should contact the college dean's office student adviser.

The college cooperates with Kansas Newman College in a dual degree biology—respiratory therapy program. Inquiries regarding the program should be addressed to the director of the respiratory therapy program.

Associate of Science in Respiratory Therapy
Preprofessional Curriculum

The respiratory therapy curriculum consists of both classroom and clinical courses. The majority of the classroom courses are taught on the Wichita State campus while the clinical courses are taught in clinical affiliations.

The following prerequisite courses must be taken by respiratory therapy majors desiring an Associate of Science in respiratory therapy. Students may complete all requirements for the Associate of Science degree totaling 74 hours in two and one half years.

Prerequisite courses for admission to Respiratory Therapy program:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engl. 101, College English</td>
<td>3</td>
</tr>
<tr>
<td>Comm. 111, Public Speaking</td>
<td>3</td>
</tr>
<tr>
<td>Psy. 111Q, General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>Biol. 120Q, Introduction to Microbiology</td>
<td>4</td>
</tr>
<tr>
<td>Biol. 223, Human Anatomy and Physiology</td>
<td>5</td>
</tr>
<tr>
<td>Chem. 103Q or 111Q, General Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>Math. 111, College Algebra</td>
<td>3</td>
</tr>
<tr>
<td>Phys. 111Q, Introductory Physics, or Phys. 131, Physics for the Health Sciences</td>
<td>3</td>
</tr>
</tbody>
</table>

Admission to the Professional Curriculum

Students submitting application to the professional program are eligible for consideration after they have met Wichita State and College of Health Professions general admission requirements.

To qualify as a candidate for admission to the professional phase of the Respiratory Therapy Program, students must:

1. Be admitted to The Wichita State University.
2. Have submitted an application to the program.
3. Have a minimum grade of C in all prerequisite courses, and an overall minimum GPA of 2.000.
4. Be working on a study plan that allows completion of all prerequisite courses before professional classes begin.
5. Be available for a personal interview.

Persons with at least one year of prior work experience in respiratory therapy or who hold the entry-level certification credential (CRTT) may apply for advanced placement testing. Guidelines are available from the program director.

Professional Curriculum

The following courses are required in the professional curriculum. For current program requirements and admission dates see departmental adviser.

**Division C-Natural Sciences and Mathematics**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>RT 111, Introduction to Respiratory Therapy</td>
<td>4</td>
</tr>
<tr>
<td>RT 212, Respiratory Therapy Procedures</td>
<td>3</td>
</tr>
<tr>
<td>RT 213, Respiratory Therapy Procedures</td>
<td>2</td>
</tr>
<tr>
<td>RT 222, Introductory Clinical Practicum</td>
<td>3</td>
</tr>
<tr>
<td>RT 202, Respiratory Therapy Practicum I</td>
<td>3</td>
</tr>
<tr>
<td>RT 203, Respiratory Therapy Practicum II</td>
<td>3</td>
</tr>
<tr>
<td>RT 310, Respiratory Therapy Practicum III</td>
<td>5 or 6</td>
</tr>
<tr>
<td>RT 312, Cardiopulmonary and Renal Physiology</td>
<td>5</td>
</tr>
<tr>
<td>RT 360, Pulmonary Rehabilitation</td>
<td>2</td>
</tr>
<tr>
<td>RT 426, Cardiopulmonary Disorders and Manag</td>
<td>5</td>
</tr>
<tr>
<td>RT 435, Ventilators and Applied Critical Care</td>
<td>4</td>
</tr>
<tr>
<td>RT 436, Ventilators and Applied Critical Care</td>
<td>4</td>
</tr>
<tr>
<td>RT 450, Introduction to Neonatal Respiratory Care</td>
<td>4</td>
</tr>
</tbody>
</table>

*This course may be taken before or during the professional curriculum.

**Special Requirements**

Students are required to purchase uniforms and other items needed during clinical learning experiences. Students also are required to purchase professional liability insurance. For specific information, please contact your department adviser each semester. In addition, students are required to provide their own transportation to and from the health care agencies used for clinical experiences.

Information related to special requirements is available to students in the Respiratory Therapy Program, The Wichita State University, Wichita, Kansas 67208-1595.

Lower-Division Courses

101. Overview of Respiratory Therapy. (2). An overview of the profession, the cardiopulmonary system and therapy modalities.

102. Cardiopulmonary Resuscitation. (1). Provides instruction and supervised practice of cardiopulmonary life support plus introduction to basic terminology and principles of circulation and respiration; special emphasis on guidelines for prudent heart living. Graded S/U.

111. Introduction to Respiratory Therapy. (4). Familiarizes students with the history and evolution of respiratory therapy and with the role of the respiratory therapist in the health care community. Also includes the study of medical terminology and the application of basic scientific principles pertinent to respiratory therapy practice. Prerequisite: departmental consent.

202. Respiratory Therapy Practicum I. (3). The student acquires practical experience in affiliated health care agencies. Stresses therapy in noncritical areas as well as overall departmental operations. Prerequisite: RT 222.


212. Respiratory Therapy Procedures. (3). Presents the basic therapeutic and diagnostic skills and techniques used by the respiratory therapy practitioner which can be developed in a skills laboratory. Includes medical gas therapy, humidity and aerosol therapy. Prerequisite: RT 111. Corequisite: RT 213.

213. Respiratory Therapy Procedures Laboratory. (2). Accompanies RT 212. Provides practical experience in a simulated laboratory setting, including basic therapeutic and diagnostic skills and techniques used by respiratory
The course in difficult air. The following abbreviations are used to indicate lecture and lab hours: 4R; 2L means four hours of lecture and two hours of lab.

**Upper-Division Courses**

301. Seminar I. (2). Discussion of departmental operations. Prerequisite: RT 222.

302. Seminar II. (2). Discussion of advanced skills and techniques involving patients and preparation of case studies. Prerequisite: departmental consent.


320. Clinical Projects. (1-3). Provides an opportunity for the student on an individual basis to select a topic for independent investigation. Repeatable to six hours.

325. Cardiopulmonary and Renal Physiology. (5). An in-depth study of pulmonary and cardiovascular physiology accompanied by an overview of the kidney's role in fluid, electrolyte and acid base balance. Emphasizes understanding essential mechanisms of normal function; within this context, applies knowledge in interpreting diagnostic studies and in understanding disordered function. Prerequisite: Biol. 223 or equivalent.


360. Pulmonary Rehabilitation. (1-5). Presents and discusses objectives, methods and expected results. Describes and discusses patient testing methods, including clinical exercise testing, patient and family education, bronchial hygiene, breathing retraining, biofeedback, physical reconditioning and home care. Prerequisite: departmental consent.

426. Cardiopulmonary Disorders and Management. (5). A study of the diagnosis, treatment and management of cardiopulmonary disorders. Emphasizes (1) interpretation of diagnostic tests, (2) applying these interpretations to the treatment and management of the disease and (3) understanding essential mechanisms of disordered function. Uses patient management problems and case study approaches. Prerequisite: RT 222 and 325.


450. Introduction to Neonatal Respiratory Care. (3). Provides an overview of the basic principles and techniques utilized in the cardiopulmonary management of the high-risk neonate. Discusses physiologic, laboratory and rhoeotopngraphic assessment, pathophysiology, monitoring and therapeutic techniques. Prerequisite: departmental consent.


**Course for Graduate/Undergraduate Credit**

550. Advanced Perinatal Cardiorespiratory Care. (3). Cross-listed as HS 550. Focuses on diagnostic and therapeutic cardiopulmonary modalities used in the care of high risk mothers and infants. Includes equipment and techniques used in tertiary care perinatal centers: high frequency ventilation, ECMO, air transport, and so on. Emphasizes the respiratory care and medical management of critically ill and difficult-to-treat patient. Prerequisites: RT 450 and 203 or instructor's consent.

The following abbreviations are used in the course descriptions: R stands for lecture and L for laboratory. For example, 4R, 2L means four hours of lecture and two hours of lab.
Fairmount College of Liberal Arts and Sciences

Phillip D. Thomas, PhD, Dean

Fairmount College of Liberal Arts and Sciences offers a variety of programs designed to serve the general objectives of The Wichita State University and to enhance its urban mission. The college seeks to preserve the cumulative learning of the past, interpret the research of the present and enlarge the educational opportunities for the future by offering courses and curricula representing the newest developments in the world of learning.

For some time, the college has recognized four main areas of study: (1) preparation for professional and technical careers, (2) specialization through departmental majors, (3) cross-cultural education and (4) preparation for teaching. In recent years, however, the college faculty has expanded these traditional views to encompass nontraditional forms of education and the use of field majors. Substantial flexibility exists within all these areas for the college serves both those who return after many years away from school.

Degrees Offered

Undergraduate

The Bachelor of Arts, Bachelor of Science and Bachelor of General Studies degrees are conferred by Fairmount College of Liberal Arts and Sciences. Each degree requires the completion of a minimum of 124 credit hours, the attainment of an overall grade point average of 2.000 including transfer work, a grade point average of 2.000 in the major field of study and a 2.000 WSU grade point average.

Bachelor of Arts degrees are offered in American studies, anthropology, biological sciences, chemistry, communication, computer science, classical languages, economics, English, French, geology, German, history, communicative disorders and sciences, mathematics, minority studies, philosophy, physics, political science, psychology, social work, sociology, Spanish and women's studies. Bachelor degrees in linguistics and religion were phased out beginning in 1987; however, students in both programs will be accommodated. Both areas will be emphases within the general studies program or may be incorporated in a field major.

The Bachelor of Science is available in administration of justice, biological sciences, chemistry, computer science, geology, mathematics and physics.

The Bachelor of General Studies is a nondepartmental degree which requires breadth in distribution of course work and allows for the development of areas of concentration which may be thematically or occupationally related.

Graduate

Graduate programs are offered through the Graduate School in many liberal arts and sciences areas. The Master of Arts (MA) may be earned in anthropology, communication (interdisciplinary), English, history, political science, psychology, sociology and Spanish. The Master of Science (MS) may be obtained in biological sciences, chemistry, computer science, geology, mathematics and physics.

The Master of Computer Science (MCS) is awarded in computer science; the Master of Fine Arts (MFA) in creative writing; the Master of Administration of Justice (MAJ) in administration of justice; the Master of Education (MED) in speech; the Master of Arts in Liberal Studies (MALS) in interdisciplinary studies; and the Master of Public Administration (MPA) in public administration.

The Doctor of Philosophy (PhD) degree is offered in chemistry, applied mathematics and psychology—human factors.

For more information, consult The Wichita State University Graduate Bulletin.

Policies

Admission

Students may be admitted to Fairmount College of Liberal Arts and Sciences upon successful completion of 24 semester hours with an overall and WSU grade point average of 2.000. Students must complete all basic skills courses (English 101 and 102 with grades of C or better; Communication 111; and Math 111, 112 or 211) prior to admittance to Fairmount College.

Probation and Dismissal Standards

Students are placed on probation whenever their cumulative WSU grade point average falls below 2.000. Probation is removed when the overall WSU grade point average reaches the required 2.000 level. Students continue on probation when they earn a 2.000 or better semester average and their overall WSU grade point average remains below 2.000. If students on probation fail to earn at least a 2.000 semester average, and if their WSU overall grade point average remains below 2.000, they will be dismissed. Students on probation will not be academically dismissed unless they have attempted at least 12 hours after being placed on probation. When dismissed, students may reenroll only with the permission of the college's Committee on Admissions and Exceptions.

Application for Graduation

Every student seeking a degree from the college must apply for graduation and complete a degree card at the end of the semester in which 90 credit hours have been earned. Although graduation may be several semesters away, both application and degree card must be completed at this time. Applications filed in the semester in which graduation is intended may result in a delay in actual graduation by one or more semesters.

Students planning to receive the Bachelor of General Studies degree will declare their intention at least 30 hours before the degree is granted. A plan of study including the area of concentration should be initiated as soon as possible—but no later than 30 hours before the degree is granted—with the Bachelor of General Studies adviser in the primary department of interest (see Area of Concentration in Section XII below). The plan of study must be approved by the BGS Policy Committee, a subcommittee of the Curriculum and Academic Planning Committee of Fairmount College. This plan will be submitted along with other application for graduation materials to the Liberal Arts and Sciences dean's office. Thirty credit hours must be completed after the student's declaration to pursue the Bachelor of General Studies degree is filed.

Applications and degree cards may be obtained from the college office, Room 200, Liberal Arts and Sciences.

Cross-Listed Courses

Selected courses in the University curriculum are cross-listed because course content is suitable to more than one ac-
Field Trips
Attendance on field trips is mandatory in any course that includes in its Catalog description a statement that field trips are required or in which the instructor states that field trips are essential for earning credit. Absences are permitted only with the instructor's prior approval. Students may have credit withheld for a course if they do not complete the required field trips.

Credit for Life Experience
Fairmount College of Liberal Arts and Sciences offers credit for life experience when a student's learning from life experiences would duplicate the content of a course offered in the catalog, when the student has worked with the faculty member authorized to teach that course to document the learning from that life experience, and when the faculty member has ascertained that the documentation supports the award of credit. This credit may come through learning experiences such as business or industry training programs, extensive experience in community service or volunteer work, operating a business or holding elective office.

While some other universities fit college credit to the student's experience, Fairmount College (the only college at Wichita State to award such credit) requires that the learning from life experience fit the approved curriculum of the college. We are conservative in protecting the autonomy of the faculty and the goals of the curriculum. In keeping with these objectives, the faculty assists students in demonstrating their mastery of the content of a class with means appropriate to the particular class.

For instance, a person who seeks life experience credit for Business, Professional and Technical Writing might be asked to prepare a portfolio of material developed for a professional assignment and to write a theoretical paper on some aspect of technical writing. For a Television Production course, a student might be asked to provide a television tape of work produced for a local television station, and discuss various technical and application issues with the instructor. It becomes apparent that the most applied and less theoretical classes lend themselves more readily to this procedure.

Students who are authorized by faculty to develop a portfolio or other documentation to seek life experience credit must be admitted to The Wichita State University and must pay a nonrefundable assessment fee to the Office of the Controller. Students will be advised of fees upon entering the program. The faculty member sends a memo authorizing the (ungraded) credit to the college office. Credit is awarded and is noted on the student's transcript.

Cooperative Education
The Fairmount College of Liberal Arts and Sciences participates in the Cooperative Education program which finds paid internships for undergraduates and graduates who wish to combine their classroom studies with academically related employment.

Further information is available in the Cooperative Education office, 125 McKinley Hall, or the academic information section of the Catalog.

Requirements for Graduation

Bachelor of Arts, Bachelor of Science, and Bachelor of General Studies
The following college requirements must be met in order for students to receive the Bachelor of Arts (BA), the Bachelor of Science (BS), or the Bachelor of General Studies (BGS) degrees from the college. Courses taken to fulfill these requirements also satisfy the University's general education distribution requirements. The requirements for the BA, BS and BGS fulfill all University graduation requirements except the following:

1. Communications—six hours of composition and three hours of oral communication (a grade of C or better must be earned in both Eng. 101 and 102).
2. General Education—30 hours of "Q" and "G" courses including a minimum of nine "G" hours. These courses may be used to satisfy University and college distribution requirements.
3. Upper Division—at least 40 semester hours of credit in courses numbered 300 or above.
4. Residence—at least 30 semester hours of course credit at Wichita State. At least 24 of the last 30 semester hours or 50 of the last 60 semester hours must be completed at Wichita State.
5. D Grades—no students are allowed credit toward graduation for D grade work in excess of one-quarter of the total hours.

I. Humanities. Candidates for the BA and BGS degrees must take 12 to 15 hours of courses in at least three of the following subdivisions. Three to six hours from the major or the area of concentration may apply in this distribution toward the BA or BGS. Candidates for the BS degree must take nine hours in at least three of the following subdivisions. Nine hours must be "G" or "Q" courses in each degree.

1. American Studies
2. Literature (see Item II), English Language and Literature
3. History (see Item III)
4. Linguistics—Ling. 151G, 315, 577
5. Philosophy
6. Religion
7. Communication: Speech Comm. and Electronic Media
8. Women's Studies
9. Art History (any course); and Music—Mus. C. 113Q, 114, 160G, 161, 162; and Theatre.

II. Literature. Students must complete at least three hours of literature. Foreign language literature courses taken after completion of the foreign language requirement (if any) may be used to meet the literature requirement and to count for humanities hours.

III. History—Political Science. Students must demonstrate proficiency in the field of the American political system and institutions either by passing Hist. 131Q or 132Q or Pol. S. 121Q or by passing an examination offered each semester by the history and political science departments.

IV. Social and Behavioral Sciences. Candidates for the BA and BGS degrees must take 12 to 15 hours of courses in at least three of the following subdivisions. Six hours from the major or the area of concentration may be included. Candidates for the BS degree must take nine hours in at least two of the following subdivisions. Only three hours from the major department may apply. In each degree, six hours must be in "G" or "Q" courses.

1. Administration of Justice
2. Anthropology
3. Economics—Econ. 101G, 201Q, 202Q and all upper-division
administration of justice must demonstrate proficiency at a level equivalent to five hours beyond the 112 course in one foreign language or equivalent to the completion of the 112 course in two foreign languages. This proficiency may be demonstrated in either of the following ways:

1. Students may successfully complete 111 and 112, plus five additional hours in one foreign language, or 111 and 112 in two foreign languages.
2. Other foreign language experience, or high school foreign language study at the rate of one high school unit for each college semester, may apply toward the required proficiency.

A student who has credit in two years of a high school foreign language may enroll in 111 and 112 for credit without departmental consent.

A student who has credit in three or more years of high school foreign language may take 111 and 112 for credit only if departmental consent has been received in writing. Otherwise, a student who has credit in three or more years of a high school foreign language may enroll in any 200-level course for credit without departmental consent.

Candidates for the BS within the division of natural sciences and mathematics have no foreign language requirement unless it is required by the department. In that case, the foreign language required does not count in the humanities section of the general education distribution requirements.

The BGS also has no foreign language requirement.

VI. Mathematics. Students must demonstrate proficiency by passing Math. 111, 112 or 211, or by passing an examination of equivalent mathematical skills. Six hours in mathematics or natural sciences must be in "G" or "Q" courses.

VII. Foreign Languages. Candidates for any BA degree and for the BS degree in approved by the department.

4. At least 12 upper-division hours are required in the major or area of concentration.
5. No more than 45 hours in the major can be used for graduation with a BA degree and no more than 50 hours in the major can be used for graduation with a BS degree.
6. The same hours cannot be used to satisfy requirements for two or more majors or minors or combination thereof.

IX. Combined Major. A BA degree with a combined major, consisting of 24 hours from one field of study and 12 hours from another field of study, may be designed under the advisement of the major departments and Fairmount College of Liberal Arts and Sciences.

X. Field Major. Field majors in biochemistry, chemistry/business, classical studies and international studies are available. Other field majors may be designed by students who wish to select three or more correlated areas of study and develop an acceptable plan of course work. Field majors must adhere to the following rules:

1. At least 18 hours must be taken in one department and nine hours in each of two allied departments (36 hours total) with at least 12 of these hours upper division.
2. A plan of study must be developed in consultation with and approved by an adviser in the major area of study and the dean's office of Fairmount College of Liberal Arts and Sciences.

XI. Minor. Minors are offered in geography, Italian and all fields of study in which a major may be earned. Minors acceptable from outside the college are accounting and business administration through the Barton School of Business, plus art history, studio arts, music and theatre through the College of Fine Arts. The number of hours required for a minor is set by each department. A 2.000 grade point average is required in the minor.

XII. BGS: Area of Concentration. The Bachelor of General Studies degree allows students who wish to design their own programs of study greater flexibility by reducing some of the requirements of the other bachelor's degrees for the purpose of allowing the student to develop areas of concentration which may cross departmental, or even college lines. The
Bachelor of General Studies degree allows the student to become a generalist and may allow preprofessional or nontraditional career students greater flexibility in planning for their unique future.

With the assistance of the Bachelor of General Studies adviser in the department of primary interest, each student pursuing a Bachelor of General Studies degree will develop a plan of study which outlines an area of concentration incorporating a minimum of 33 hours. No fewer than 15 and no more than 21 of these hours will be taken in a “focal” or primary department. The remaining 12 to 18 hours must be divided between at least two other departments. Concentrations may cross departmental or college lines in that they may be thematically or occupationally related. No general studies courses (“G” courses) will count toward the “primary” portion of the concentration but will be allowed in the additional portions.

Distribution requirements limit course work to no more than 30 hours from one department, to no more than 60 hours in one division and to no more than 30 out-of-college hours.

XIII. Nonliberal Arts and Sciences Courses. Students may count only 24 hours of nonliberal arts and sciences courses toward either the BA or BS degree. 30 hours of nonliberal arts and sciences courses may count toward the BGS degree. (This includes courses taught outside of departments in the liberal arts and sciences.) Any nonliberal arts and sciences courses required by a major within the college will apply to LAS hours required for the degree.

Special Programs of Study
Fairmount College of Liberal Arts and Sciences provides basic courses for certain professional fields and for subsequent professional studies. Liberal arts studies are vital in establishing background resources for such areas.

Field Major
Students may select a major that correlates three or more fields of study to receive a broad appreciation of the cultural and dynamic factors of human conduct. The selection of courses must be made with an adviser and with the dean’s approval. Although such a major cuts across departmental lines and is determined by the field of specific interest, the combination of courses must be acceptable to the college. Normally 36 hours are required for the major with 18 hours in the major department and at least nine in each of the two allied departments. Students may work with an academic adviser in developing an appropriate field major or may use one of the predesigned field majors indicated below. Students must must meet BA graduation requirements for all field majors except biochemistry and chemistry/business which lead to the BS degree.

Biochemistry. Biochemistry is a rapidly growing science in which many important advances have been made in the last two decades. It requires both an understanding of biological processes and a knowledge of sophisticated techniques of chemistry and physics. The field major in biochemistry is designed to prepare students for employment or further study in this area.

Students choosing this field major should seek the advice of the chairperson of the Department of Biological Sciences or the Department of Chemistry as early as possible. Both the biological sciences and chemistry sections of the Catalog provide complete descriptions of this major.

Chemistry/Business. See the chemistry section of the Catalog for complete description.

Classical Studies. Classical studies is an interdisciplinary program designed to give students a sense of continuity and to interpret the values, ideas and ideals of antiquity as shown in its history, art, mythology, literature, political institutions and religions. The major also serves as a sound preparation for areas in which sensitivity to language and ideas is an important tool—classics, linguistics, ancient history, art history, archaeology, comparative literature, law, religion and Near Eastern studies.

The major consists of 36 hours which must be selected from a list of approved courses, except that courses of independent study in one of the departments of the field major may count toward the major if the subject matter is at least half classical. For further information and a list of approved courses contact the Department of Modern and Classical Languages and Literatures.

International Studies. The program for the international field major is flexible and is designed to meet the need for specialists in foreign areas, international government or international economics, government, business and international organizations. Students are prepared for careers in international organizations in the U.S. government and in business firms with international activities.

Two options are available: Option A is in area studies; Option B is a combination of area studies and international business. No minor is required for either option. Students interested in Option A should contact Professor John Dreifort (history); those interested in Option B should contact Professor Dharma de Silva (management) or Professor Dreifort.

Communicative Disorders and Sciences
Students desiring an emphasis in applied language study should see requirements and curriculum for a major in communicative disorders and sciences through Fairmount: College of Liberal Arts and Sciences listed in the College of Education section of the Catalog.

Special Preprofessional Programs
Advisors in the various preprofessional fields and closely related departments provide specific information regarding courses and requirements.

Prelaw
The Association of American Law Schools states that students interested in pursuing a law degree should get a broad undergraduate education that provides “comprehension and expression in words, critical understanding of the human institutions and values with which the law deals and creative power in thinking.” These qualities are to be achieved through disciplined study in fields of the student’s choice. Requirements for the bachelor’s degree provide students with both a general education and a concentration in a major field of study.

Prelaw advisors may be contacted through the college office in Room 200 of the Liberal Arts and Sciences building where students can find information about entrance requirements for law school so that undergraduate programs may be appropriately arranged.

Premedical, Predental, Preveterinary, Prepharmacy, Preoptometry, Prepodiatry, Prechiropractic
Medical schools encourage students to obtain a broad education in addition to the prerequisite studies in the sciences. Preparation for the study of medicine should include courses that develop disciplined thinking, intelligent appreciation of values and sympathetic understanding
of society and human interaction. Since the study of medicine is associated with scientific knowledge and techniques, courses in biological sciences, chemistry, physics and allied fields are required. Students may choose to major in one of these fields or they may select any other major in preparation for the study of medicine. The primary core of prerequisite courses necessary for admission to most medical professional schools includes one year each of English, math, biology, inorganic chemistry, organic chemistry and physics.

The completion of a bachelor's degree is a general admissions requirement for the majority of medical schools. A few medical schools grant admission on the basis of a three-year program of studies. Wichita State students on the three-year program may be granted the bachelor's degree by Wichita State if they have taken 94 hours of preparation (the last 30 must be taken at Wichita State) within the required fields of study; earned 188 credit points with no more than 20 hours of D grade work; passed the first year of medical or dental school (for 30 hours); and qualified for admission to the second year. Candidates must apply for the degree. Biological sciences majors are required to complete 94 hours plus the requirements for a major listed under the Department of Biological Sciences section of the Catalog.

Dental schools require prescribed preparation in the sciences as well as a broad education. Entrance requirements are generally similar, but students should give careful attention to the pattern in each school of their choice. Emphasis on the sciences is recommended. The counselor for preprofessional studies in Fairmount College of Liberal Arts and Sciences can provide a specific program of course work for either the three-year or four-year program.

The preparation for the study of veterinary medicine generally includes a minimum of 71 hours and an emphasis on science courses. The counselor for preveterinary medicine in Fairmount College of Liberal Arts and Sciences can provide a specific program of course work.

Schedules also may be arranged to meet entrance requirements of the various schools of optometry, osteopathy, pharmacy, podiatry, chiropractic, mortuary sciences and related professional fields. The office of the premedical professions counselor is in Room 200 of the Liberal Arts and Sciences building.

Pretheological
Students interested in pursuing graduate theological work should consult with the religion department chairperson for specific requirements set forth by specific seminaries.

Teaching
Students in Fairmount College of Liberal Arts and Sciences may qualify for secondary teaching certificates in Kansas and additional states. Those who plan to qualify for the standard secondary teaching certificate must complete the program outlined in the College of Education section of the Catalog.

Administration of Justice
The Department of Administration of Justice offers the Bachelor of Science degree by Wichita State for the Bachelor of Science in Administration of Justice degree. These degree programs are designed to provide preservice and inservice students with a broad educational background in all aspects of the administration of justice. The Bachelor of Science degree program is described below.

Bachelor of Science—Major and Minor
Major. The major in administration of justice consists of at least 33 hours (but not more than 50 hours). The curriculum is divided into three areas:


Students must complete the 21 hours of core courses and 12 additional hours. Nine of these 12 hours must be in Group A. The remaining 3 hours can be in Group A or Group B. Students may take 17 hours additional credit hours beyond the 33 hours which are required for the major (for a total of 50 hours). These hours can be in Group A or Group B with the following restrictions: there is a maximum of 6 hours in each of the following: 481, 482 or 483; and there is a maximum of 12 hours total in any combination of the following: 481, 482 and 483.

Students seeking the Bachelor of Science degree with a major in Administration of Justice must complete at least 21 semester hours of upper-division course work in administration of justice. Upper-division course work is defined as junior- and senior-level course work offered by an accredited, four-year college or university and considered by Wichita State and the Department of Administration of Justice to be of upper-division academic quality.

Students who plan to graduate with a BS in Administration of Justice must satisfy the Fairmount College of Liberal Arts and Sciences requirements and the University requirements for the Bachelor of Science degree.

Minor. The minor in administration of justice consists of at least 18 hours of administration of justice courses, including AJ 191Q and four upper-division courses.

Emphasis in Cross-Cultural Communications in Administration of Justice. The emphasis in cross-cultural communications in administration of justice is designed to provide learning experiences that will prepare practitioners to promote favorable interaction between criminal justice agencies and the minority groups they serve. This emphasis area attempts to prepare students to develop empathetic responsiveness, combined with humanistic insights and to develop and maintain mutually dependent helping and working relationships between criminal justice agencies and a variety of minority groups.

Students majoring in administration of justice also may obtain the Certificate of Emphasis in Cross-Cultural Communications in Administration of Justice in addition to the BS in administration of justice degree. Those students seeking this certificate must satisfactorily complete Min. S. 210Q and one of the following: Min. S. 331, 332, 333 or 334. Also, students must take 12 additional hours in minority studies course work, nine of which must be in upper-division courses.

Lower-Division Courses
AJ 191Q or departmental consent is prerequisite for all administration of justice courses unless otherwise noted.


191Q. Introduction to Criminal Justice. (3) Division B course/elective. An introduction to the philosophy and history of law enforcement identifying multiple facets of the administration of justice system including the police, the courts, correctional agencies and the offender. Studies the administration of justice role as it relates to the individual and to society. Through visitation and contact with adminis-
Criminalistics and Scientific Crime Detection. (3) Studies the application of the natural sciences to assist law enforcement officers and the criminal justice system. Studies investigative procedures from the crime scene through laboratory analysis, to the presentation of evidence in court.

Special Investigation. (3) Care, collection and preservation of evidence. Studies sources of information and locating subjects, crime scene recording and investigative techniques applicable to specific offenses.

The Victim in Criminal Justice. (3) Division B course/elective. An examination of the relationship of crime victims to the criminal justice system. Consideration is given to the role of the victim in crime occurrences, as well as theoretical developments in the field.

Juvenile Justice. (3) An analysis of decision-making processes in juvenile justice, the content of juvenile law and Supreme Court decisions affecting juvenile justice. As well as specific select problems in the administration of juvenile justice.

Organized and White Collar Crime. (3) Surveys the history, scope and impact of organized and white collar crime in America, areas of influence, remedial practices and methods of legal control. Reviews the societal conditions involved in the appearance, spread and expansion of organized and white collar crime in America and the overlap and interrelationship between corporate and business crime (white collar and organized crime). Emphasizes the processes of infiltration, fraud and corruption that are characteristic of these conspiratorial crimes.

Hostage and Crisis Negotiations. (3) Cross-listed as Comm. 349. Introductory course focusing on the study of negotiation management and techniques appropriate to the handling of hostage negotiations, barricaded-subject negotiations and other exigent situations such as suicide and violent domestic disturbances. Examines the use and training of special tactical and negotiations teams. Prerequisites: AJ 191Q and Comm. 1:2 or instructor's consent.

Crime Causation and Criminal Justice Policy. (3) Introduction to theoretical issues in criminal justice. Primary emphasis is the etiology of criminal and delinquent activity and the response of the criminal justice system to such behavior. Discusses the significant contributions of outstanding criminologists, as well as elaborating the application of these perspectives to criminal justice agencies.

Special Topics. (3-6) Group project and inquiry through student investigation under faculty supervision of administration of justice topics including law enforcement, corrections and the judicial process. Repeatable for credit not to exceed a total of six hours.

Courts and Judicial Systems. (3) Examination of recent judicial interpretations affecting legal process, rules of evidence, substantive law and administrative law. Makes an in-depth study of statutory provisions emphasizing the conflict of laws and legal trends affecting administration of justice personnel.

Management of Criminal Justice Agencies. (3) An intensive examination of a variety of emerging administrative and management concepts and the processes related to the determination and implementation of management philosophy. Prerequisite: AJ 201 or departmental consent.

Criminal Evidence. (3) Concepts of criminal evidence rules as they pertain to kinds and degrees of evidence—procedure for admitting or excluding evidence; witnesses and privileged communications, the hearsay rule and its exceptions; and judicial notice, burdens of proof and presumptions: emphasizes the rules of evidence that govern the administration of justice process.

Civil Justice: Torts. (3) Introductory course; examines the background and origin of tort law; intentional and unintentional acts by defendants, negligence and absolute liability.

International Criminal Justice. (3) Division B course/elective. Acquaints students with the structural and functional aspects of law enforcement agencies, court systems, correctional facilities, juvenile treatment and crime prevention strategies employed by different societies throughout the world. Incorporates the role of the United Nations in the treatment of offenders and crime prevention.

Community Relations in Criminal Justice. (3) Analysis of techniques utilized by administration of justice agencies in both public and community relations programs that are designed to optimize the agency's communication capability. Special emphasis on the unique characteristics of both public and community relations.

Crime Prevention. (3) A study of the theories of crime prevention efforts by government and non-governmental and community agencies. Analysis of factors which contribute to the reduction of crime; crime analysis and prediction; the methodology of gathering crime data; and the relationships between the criminal justice system and the public.

Cooperative Education. (1-6) Provides a field placement which integrates theory with a planned and supervised professional experience designed to complement and enhance the student's academic program. Individualized programs must be formulated in consultation with and approved by the departmental cooperative education coordinator. Prerequisites: administration of justice major; 15 hours of administration of justice courses, junior or senior standing and consent of the criminal justice agency. Offered Cr/Ncr only.

Internship. (3-6) Supervised field placement with a governmental or private law enforcement, court correction, juvenile justice, forensic science or security agency. Provides a learning experience in which the student can integrate and apply knowledge and theory derived from the administration of justice curriculum. Interns work 96 hours for three hours credit, there is a maximum of six hours credit.
Prerequisites: 15 hours in administration of justice, junior or senior standing, consent of the criminal justice agency and internship coordinator's consent.

483. Individual Directed Study. (1-3). Study in a specialized area of the administration of justice system emphasizing the student's research project. Repeatable for credit not to exceed a total of six hours. Prerequisites: 15 hours in the administration of justice core and departmental consent.


Courses for Graduate/Undergraduate Credit

595. Research Methods. (3). An introduction to statistical methods, including experimental design, the analysis of statistical processes and related procedures. Studies the general methodology of research as it pertains to the administration of justice.

600. Forensic Anthropology. (3). Cross-listed as Anthr 600. Encompasses the areas of criminal investigation involving biological evidence: blood, hair, fingerprint, dentition and skeletal system. Covers procedures of collection, preservation, marking, transportation, referral, laboratory analysis, classification and identification, emphasizing anthropological interpretation.

621. Environmental Law. (3). An in-depth analysis of emerging federal, state and local legislation; judicial decisions, and administrative policy to environmental protection. Explores the roles of the administration of justice agency and a variety of governmental and nongovernmental protective agencies as related to prevention, investigation and enforcement processes of environmental protection. Special emphasis on the contribution administration of justice agencies can make toward development and implementation of effective environmental public education and assistance programs.

630. Security, Theory and Practice. (3). Advanced course emphasizing the interrelationships between theories underlying contemporary security practice. Prerequisite: AJ 231 or departmental consent.

641. Forensic Psychiatry. (3). Analysis of the role of psychiatry in the administration of justice process. Introduces the student to concepts and procedures of forensic psychiatry.

643. Forensic Science. (3). Analysis of the medical role of prevention, detection and treatment related to the administration of justice. Emphasizes medical specialty areas, such as pathology and psychiatry which have significant effect on segments of the administration of justice process.

651. Dispute Resolution in Administration of Justice. (3). Analysis of community and individual reactions to agency policy and services. Emphasizes the agency's role as mediator between offenders and victims of crime and between other groups and individuals in conflict.

781. Cooperative Education. (1-6). Provides a field placement that integrates theory with a planned and supervised professional experience designed to complement and enhance the student's academic program. Students work with a faculty member in the formulation and completion of an academic project related to the field experience. The cooperative education experience must be an integral part of the student's graduate program. Individualized programs must be formulated in consultation with, and approved by, the department cooperative education coordinator. Open only to AJ graduate students. Offered C/F/NC only.

782. Workshop in Administration of Justice. (3).

783. Advanced Special Topics in Administration of Justice. (1-4). Detailed study of topics in administration of justice with particular emphasis established according to the expertise of the various instructors. Prerequisite: departmental consent.

Courses for Graduate Students Only

816. Correctional Administration. (3). Analyzes basic methods utilized in the organization and accomplishment of objectives in correctional institutions. Reviews methods utilized in traditional correctional institutions, diagnostic centers, halfway houses and other treatment models.

855. Seminar on Juvenile Justice. (3). An analysis of the criminal justice process as related to the youthful offender. Emphasizes functional components, such as training of corrections personnel, community coordination for delinquency prevention and control, police-school relations, and ethical, administrative and operational aspects of juvenile justice agencies.

856. Agency-Community Relations. (3). In-depth analysis of the role of agency administrators in community relations and related public officials in existing community programs. Special emphasis on a multiplicity of approaches for developing new lines of communication between the agency and the community.

861. Police Administration. (3). A comparative survey and analysis of administrative philosophy, problems, procedures, organizations and functions of effective agency organization. Considers administrative skills related to operations and personnel.

881. Internship. (3-6). Supervised field placement in a criminal justice agency. For three credits, the student works 192 hours and completes an academic project under the direction of a faculty member. Prerequisite: consent of internship coordinator.

882. Individual Directed Study in the Administration of Justice. (3-6). Faculty directed readings and/or research in special areas of interest in the field of administration of justice.

Prerequisite: departmental consent.

891. Judicial Process. (3). The review and analysis of local, state and federal criminal statutes and court decisions as they apply to the administration of justice process.

893. Seminar on the Application of Criminological Theory. (3). An in-depth analysis of the major theories of crime and of their importance to the administration of justice process. Emphasizes the student's development of a consistent and valid frame of reference.

894. Critical Issues. (3). Investigates emergent phenomena in the overall system of criminal justice to demonstrate the pertinence of theory to practice. Includes role conflicts in law enforcement and corrections, police professionalism, the offender as a client for services, and corrections as a setting for research.

895. Policing in America. (3). A study of law enforcement topics including the historical development of policing, the police role, occupational socialization and problems of police work in the United States.

896. Corrections in America. (3). Focuses on analysis and evaluation of contemporary correctional systems in America including both institutional programs, such as prisons and jails and noninstitutional programs which focus on alternatives to incarceration in community settings, such as diversion, probation, parole, half-way houses, and work release centers and restitution.

897. Advanced Research Methods in Administration of Justice. (3). Advanced research course; studies the selection and formulation of research problems, research design, hypotheses generation, scale construction, sampling procedures and data analysis and interpretation. Prerequisite: AJ 595 or equivalent.

899. Thesis. (3-6). Prerequisite: consent of departmental graduate committee.

American Studies

American studies is an interdisciplinary approach to American culture which seeks to see the national experience as a whole rather than from a single perspective. The program involves students in an examination of American culture and society—its character and values, its intellect and behavior. It studies its institutions, geographical and physical regions, myths and stereotypes, everyday life, literature, films, music, art, mass media and material culture. A collaboration of scholars working in different academic disciplines, American studies is not so much a subject as an outlook—a broad, open-minded perspective upon the nation's past, present and future. The American experience can be best understood when students pursue the American character across academic disciplines and gather
insights from each of them. The result will be an awareness of the multiplicity of forces that molds American culture. “Americanists” deal with the complex and often contradictory patterns of civilization and are thus prepared for a variety of careers in the arts, business, education and government as well as for graduate school education.

The student should plan an individualized program of study with a departmental adviser after completing nine hours of course work in American studies. A senior paper in Am. St. 799 is required. While suggested for all students, Am. St. 210 Q does not count toward the major. American studies students are encouraged to fulfill University general studies requirements from courses which include the following: Econ. 101G, Engl. 232G, HAE 231G and Hist. 336G.

Major. The American studies major consists of 36 hours distributed as follows:

I. 24 hours of American studies courses from these areas—Am. St. 100 (3 hours); 3 hours from Am. St. 160Q, 210Q, 213 or 275Q; 3 hours from Am. St. 315, 350Q, 400 or 450; 3 hours from Am. St. 499A, 499B, 499C or 499D; 3 hours from Am. St. 512 and 9 hours from Am. St. 701, 702, 798 or 799.

II. 6 hours in American studies electives from any area.

III. 6 hours from at least 2 of the following 3 groups:

Humanities. Engl. 252Q, 365; Rel. 240; Wom. S. 150D, 150E, 530; Hist. 131Q, 132Q, 517, 518, 521, 522, 533, 534, 535Q, 537, 539.

Social Sciences. Pol. S. 121Q, 315, 316Q, 318, 319, 358Q; Anthl. 511, 538, 540; Min. S. 100Q, 240Q, 260; Soc. 220Q, 315Q, 316, 339Q.

Others: Art H. 524, 526; Econ. 201Q; Cl 427; Geog. 520; Mus. 162; PE 112, 302.

Minor. A minor in American studies consists of 15 hours, including Am. St. 100, plus at least six other upper-division hours.

Lower-Division Courses

100. Introduction to American Studies. (3). Examine the development of American studies as a discipline, focusing on the major American studies research approaches adopted from such areas as the humanities, social sciences and linguistics. From their perspective as participants in American culture, students apply the techniques of interdisciplinary research to their own experience. Research approaches studied include quantitative analysis, semiotics, structuralism, literary formula theory and others. Includes film, popular literature, ethnic and sex roles, cultural myths, television, fashion, sports and advertising.

150. Workshop in American Studies. (1-3). PROVIDES SPECIALIZED INSTRUCTION USING A VARIABLE FORMAT IN AN AMERICAN STUDIES RELEVANT SUBJECT.

201G. The American Hero. (3). Division A course/elective. Defines historical, cultural and environmental conditions that fostered the rise of many genres of American folk heroes. Examines representative heroes from colonial times to the present to see how they symbolize the American character.

210Q. Crime in America. (3). Division A course/elective. A study of crime in America from colonial times to the present. Explores the evolution of crime, crime as depicted in literature, crime as depicted in popular entertainment and popular attitudes toward crime and criminals.


275Q. Studies in Popular Literature. (3). Cross-listed as Engl. 275Q. Studies various forms of popular literature (e.g., revolutionary literature, science fiction, western fiction, detective novel) emphasizing both the literary merits of this work and the way it reflects popular tastes and values. Repeatable for credit with change of content.

281. Cooperative Education in American Studies. (1-3). Permits participation in the Cooperative Education program. Offered Cr/NC only.

Upper-Division Courses


342. American Folklore. (3). Course/elective. A survey of the types and functions of unwritten traditional materials in the United States, including beliefs, tales, jokes, folk music, customs and crafts with some ethnic varieties of the unwritten materials that form the uniqueness of American culture.

350Q. American Sports Culture. (3). American sports reflect and influence our values, cultural institutions and society. The relationship between media and sports, the "business" of intercollegiate athletics, the evolution of minority group's and women's participation in sports and other topical concerns enable students to understand the impact that sports has upon our American culture.

375Q. American Film Culture. (3). Using films "visual texts" in chronological order to examine the experience of Americans in American film culture of the Vietnam era. Evaluates the collective American mentality during the distinctively American art form of popular entertainment and as distinctive literary and historical and cinematic sources.

450. The 1950s in America. (3). Promotes greater understanding of the diverse developments affecting the experience of Americans in the period 1945-1960. This period, referred to as "the fifties," is often regarded today with fond nostalgia. Examines major cultural currents of the time.

481. Cooperative Education in American Studies. (1-3). See Am. St. 281.

499A. American Film Culture. (3). Using films as sources and resources of attitudes, values and beliefs, course studies a variety of these "visual texts" in chronological order to examine such topics as attitudes towards black and women at various periods, crime and prohibition, patriotism during WWII and the Cold War mentality and the rebellious youth culture of the Vietnam era. Evaluates the collective American mentality during the distribution of these films.

499B. Women in American Film. (3). Cross-listed as Wom. S. 499B. The changing role of women in 20th century American society can be understood by how they have been depicted in American films which both create cultural values and reflect them.

499C. The Western. (3). The western novel and western film serve both as popular forms of entertainment and as distinctive literary and cinematic genres with recognizable elements: plots, formulas, characters, settings and situations. This distinctively American art form reveals much about American values, character and beliefs during the last two centuries.

499D. Kansas in Film. (3). Studies the visual images of Kansas as portrayed in Hollywood films in order to understand how a sense of place complete with stereotypes and fallacies can be created by feature-length movies.

Courses for Graduate/Undergraduate Credit


520. American Studies Through the Media. (1-3). Courses created or coordinated by the Department of American Studies; offered through various media—radio, television, newspapers and videotape. Areas of American studies emphasis vary from course to course.

701. Directed Readings in American Studies. (1-3). Prerequisites: six hours of American studies course work or equivalent and instructor's consent.

702. Directed Readings in American Studies. (1-3). Prerequisites: six hours of American studies course work or equivalent and instructor's consent.

750. Workshop in American Studies. (1). Provides specialized instruction using a variable format in a subject relevant to American studies. Repeatable for credit.
Certain courses in related departments may be counted toward an anthropology major (in all tracks) if they meet the particular needs of students and are approved by their advisers. No more than six hours from another department may be counted. (Examples: Biol. 105G, 225, 310, 584; Geol. 501, 540, 560, 564; Geog. 681; Hist. 529, 531, 539, 540; Rel. 250Q; Art H. 125.)

Minor. A minor consists of 15 hours of anthropology (including at least six hours of upper-division work) chosen in consultation with the student's major adviser.

Lower-Division Courses
100G. Anthropology of Modern Life. (3). Division B course/elective. Anthropological perspectives on the behavior and institutions of contemporary people emphasizing the mass culture of the United States.

101Q. Biological Anthropology. (3). Division C course/elective. Provides an introduction to the biological evolution and behavioral development of humans. Introduces the basic concepts of population genetics, evolution, human ecology and culture along with the types of data and modes of analysis currently used in biological anthropology. These are used to formulate explanations of the physical and cultural developments of humans and primates in the last 70 million years. Also discusses present day variations in biological and behavioral traits.

102Q. Cultural Anthropology. (3). Division B course/elective. The meaning of culture, its significance for human beings and its diverse forms among peoples of the world, past and present.

106. Biological Anthropology Laboratory. (1). Students collect and analyze data while learning to apply current techniques to the study of human and/or non-human primate skeletal, dental and biological specimens. Prerequisite or corequisite: Anthr. 101Q.

107. Cultural Anthropology Laboratory. (1). Students participate in organizing, collecting and analyzing data derived from cultural anthropological investigations. Prerequisite or corequisite: Anthr. 102Q.

124Q. General Anthropology. (3). Division B course/elective. An introduction to the fields of physical anthropology, archaeology and linguistics and an analysis of the concepts of society and culture emphasizing nonliterate peoples of the world.

126G. Popular Archaeology. (3). Division B course/elective. Archaeology for everyone—its mysteries, romance and applications. Compares roles of interested nonprofessional hobbyist, technician and professional. Emphasizes archaeology in the public eye and mind.

127. Magic, Witchcraft and Religion. (3). Cross-listed as Rel. 127. An examination of various concepts concerning the realm of the supernatural and being by primitive people. Relates such religious and magical beliefs and the resultant practices to the larger patterns of cultural context.

150. Workshop in Anthropology. (1-3). Designed to provide specialized instruction using a variable format in an anthropologically relevant subject. Repeatable for credit.

281. Cooperative Education in Anthropology. (1-4). Provides practical experience that complements the student's academic program. Consultation with and approval by an appropriate faculty sponsor is necessary. Offered CR/NC only.

Upper-Division Courses
303Q. World Cultures. (3). Division B course/elective. Comparative case studies of the cultures of existing societies of varying types, including nonliterate peoples, Third World nations and modern industrialized countries. Prerequisite: Anthr. 102Q or 124Q.

305Q. World Archaeology. (3). Division B course/elective. Introduces the basic concepts, methods, techniques and modes of analysis of scientific archaeology. These are applied to a series of problems of increasing complexity: the emergence of human culture, the development of domestic plants and animals and the evolution of cities and complex societies.

307. Peoples of Africa. (3). A description and analysis of the culture areas of Africa south of the Sahara Desert from ethnohistoric and ethnographic sources.

312. Asia Pacific Cultures. (3). Studies of the cultures and nations in eastern Asia bordering the Pacific Ocean, focusing on historical background, cultural beliefs and practices, and the distinctive patterns of each.

313. Archaeology of East Asia. (3). A broad survey of archaeology throughout eastern Asia from the early hominid fossils at Peking and Java to the development of Chinese and Southeast Asian civilizations. Special attention on China (through the Han Dynasty), southeast Asia and Australia/New Guinea. Includes recent archaeological finds of the Peoples Republic of China.

318. Psychological Anthropology. (3). The relationship of individual psychology (personality, emotion, cognition), both normal and abnormal, to group membership and cultural context.

328. Medical Anthropology. (3). Studies the health beliefs and behaviors of various human societies, especially in, but not limited to, those outside the western, scientific tradition. Covers attitudes toward the etiology of disease, the techniques of healing, the use of curative drugs and other agents, the roles of healers and therapists and the attitudes of the community toward the illness.

335. Archaeology of North America. (3). A survey of the prehistoric cultures of North America north of Mexico from the earliest peo-
puling of the continent to the time of European colonization.

361. Law, Politics and Society. (3). The study of legal and political systems in non-Western societies. Includes the origin of the state, precolonial law and politics, the impact of colonialism and problems in state building.


498. Readings in Anthropology. (2-3). Repeatable up to six hours. Special problems in anthropology. Prerequisite: 12 hours of anthropology.

Courses for Graduate/Undergraduate Credit

501. Approach to Archaeology. (3). Lab fee. An introduction to the problems of studying past cultures. Focuses special attention on methodology and techniques available to archaeologists and the theoretical rationale leading to sound interpretations of the structure of extinct cultures. Prerequisite: Anthr. 305Q or 124Q.

502. Introduction to Archaeological Laboratory Techniques. (1-3). Maximum of three hours. An introduction to the laboratory processing of archaeological materials. Direct experience in all phases of preparing excavated materials for analysis, including cleaning, restoring, preserving, numbering and cataloging of ceramic and lithic artifacts and other remains. Prerequisite: Anthr. 124Q or 305Q.

503. Approach to Cultural Anthropology. (3). Fall semester only. An overview of major current directions in the study of culture and of cultures: symbolic systems which structure social, political, economic and religious institutions, personality, the arts and bodies of knowledge. Explores controversies that presently animate discussions of the role, methods and content of modern anthropology. Prerequisites: Anthr. 102Q, 124Q or equivalent.

505. Approaches to Biological Anthropology. (3). Spring semester only. An intensive study of the three central topics in biological anthropology: evolutionary theory, paleoanthropology and modern human variation. Emphasizes current trends, theories, methods and issues. Required of all graduate students in anthropology. Prerequisite: Anthr. 101Q or equivalent.


509Q. Ancient Civilizations of the Americas. (3). Division B course/elective. A cultural survey of the Aztec, Maya and Inca. Prerequisite: Anthr. 124Q or instructor's consent.

511. The Indians of North America. (3). A survey of tribal societies and native confederations north of Mexico from the protohistoric through the historic period. Prerequisite: Anthr. 102Q or 124Q.

514. Anthropological Perspectives in Gerontology. (3). Cross-listed as Geron. 514. An anthropological analysis of the latter stages of

515Q. Ch'ines People and Culture. (3). Division B course/elective. An introduction to the peoples of China and aspects of their culture: economy, government, society, religion and the arts. Historical attention on the many adjustments the Chinese have made during the twentieth century following political revolutions, industrialization and expanding trade relations.

516Q. Japan: People and Culture. (3). Division B course/elective. An introduction to the culture of Japan including its history and prehistoric aspects of traditional culture and 20th century Japan, its economy, politics and social organization.

519. Applying Anthropology. (3). The application of anthropological knowledge in the solution of social problems in industry, public health and public administration. Prerequisite: Anthr. 102Q or 124Q.

522Q. Art and Culture. (3). A survey of the visual and performing arts of non-Western peoples with special attention to their relationships in the cultural setting. Prerequisite: Anthr. 124Q or 124Q.

526. Social Organization. (3). A survey of the varieties of social organization among nonindustrialized peoples throughout the world. Deals with family systems, kinship, residence patterns and lineage, clan and tribal organizations. Prerequisite: Six hours of anthropology.

538. Early Man in the New World. (3). A critical examination of facts and theories concerning early man in the New World from the peopling of the continent to the beginning of the Archaic Tradition, and of the role of cultural contact between eastern Asia and North America. Prerequisite Anthr. 124Q or 305Q.

540. The Indians of the United States: Conquest and Survival. (3). An anthropological inquiry into four centuries of cultural contact: conflict, resistance and renascence. Prerequisite: Anthr. 102Q or 124Q or instructor's consent.

542. Women in Other Cultures. (3). Cross-listed as Wom. 542. Deals with the place of women in primitive and other non-Western societies, in various aspects of culture: political, economic, social, religious, domestic, intellectual, psychological and aesthetic. Compares and contrasts societies in order to see how different kinds of roles for women are related to different kinds of societies.

555. Fossil Evidence for Human Evolution. (3). A detailed examination of human evolutionary history as evidenced by fossil remains and a survey of various interpretive explanations of the fossil record. Prerequisite: Anthr. 101Q or BioI. 203Q or equivalent.

556. Human Variability. (3). A critical examination of the biological aspects of contemporary human variation, stressing human adaptations. Prerequisites: Anthr. 101Q or BioI. 203Q or equivalent.

557. Human Osteology. (3). Deals with human skeletal and dental materials with applications to both physical anthropology and archaeology. Lecture and intensive laboratory sessions include bone and tooth identifications, measurement and analysis and skeletal preservation and reconstruction. Individual projects are undertaken. Prerequisite: Anthr. 104Q or equivalent.


597. Topics in Anthropology. (3). Detailed study of topics in anthropology with particular emphasis being established according to the expertise of the various instructors.

600. Forensic Anthropology. (3). Cross-listed as AJ 600. Encourages the student to apply standard methods of identification and modes of interpretation to the materials to produce an acceptable archaeological report. Prerequisites: Anthr. 502 or instructor's consent.

602. Archaeological Laboratory Analysis. (1-3). Students analyze archaeological materials, including ceramic, lithic, faunal and vegetal remains according to accepted methods. Students learn to apply standard methods of identification and determination to the planning and storage of museum techniques relating to the acquisition and interpretation of the latter stages of cultural contact between eastern Asia and North America. Prerequisite: Anthr. 124Q or 305Q.

608. Archaeological Methods. (3). An introduction to museum techniques relating to the acquisition of collections and related procedures, such as accessioning, cataloging, documentation, presentation and storage. Explores current trends in museological philosophy concerning purpose, function and relevance of museums, as well as career opportunities. Prerequisite: Instructor's consent.

609. Museum Exhibition. (3). Contemporary philosophy of exhibition design and the application of recent concepts to the planning and installation of an exhibit. Prerequisite: Anthr. 606 or instructor's consent.

611. Southwestern Archaeology. (3). A comprehensive survey of the prehistoric and living cultures of the American Southwest. Particular emphasis placed on the cultural similarities and differences between the various cultural traditions of the American Southwest. Prerequisites: six hours of anthropology and departmental consent.

612. Indians of the Great Plains. (3). An investigation of the cultural dynamics of the Great Plains area from the protohistoric period to the present. Prerequisites: Six hours of anthropology and departmental consent.

613. Archaeology of the Great Plains. (3). The archaeology of the Great Plains area from earliest evidence to the historic period. Prerequisite: one introductory course in anthropology or departmental consent.
647. Theories of Culture. (3). A survey of the main theoretical movements in cultural anthropology, including both historical and contemporary schools of thought. Prerequisite: six hours of anthropology.

651. Language and Culture. (3). Cross-listed as Ling. 651. An introduction to historical and descriptive linguistics. Deals with the ethnography of communications, lexicostatistics and linguistic determination. Prerequisite: six hours of anthropology.

667. English Syntax. (3). Cross-listed as Eng!. 667 and Ling. 667. Examination of aspects of the structure of English and their relation to linguistic theory. Prerequisite: Eng!. 315 or Ling. 557 or Antlr. 577 or instructor's consent.

690. Field Methods in Anthropology. (3-6). A maximum of six hours can be counted as anthropology hours toward either degree. Instructs the student in archaeological and ethnological field methods through actual participation in a field research program. The project depends upon the specific Summer Session and varies from year to year. Prerequisite: instructor's consent.

736. Advanced Studies in Archaeology and Ethnohistory. (3). Special area and theory problems in a historical approach to culture. Prerequisites: six hours of anthropology and departmental consent.

746. Advanced Cultural Anthropology. (3). Entails an in-depth coverage of selected topics in cultural anthropology, including social structure, economic and political organization, religion, personality, arts and knowledge systems, and current research methods. Prerequisite: six hours of anthropology.

750. Workshop. (1-4). Short-term courses focusing on anthropological problems. Prerequisite: instructor's consent.

756. Advanced Physical Anthropology. (3). In-depth coverage of selected topics in physical anthropology, including population dynamics, primatology, growth and development and current research methods. Prerequisite: Anthr. 501Q or instructor's consent.

Courses for Graduate Students Only

801. Seminar in Archaeology. (3). Comprehensive analysis of archaeological data emphasizing theoretical problems of interpretation and reconstruction. Repeatable up to six hours. Prerequisite: Anthr. 501 or departmental consent.

802. Methods in Anthropology. (2-3). Develops abilities in the conception and investigation of anthropological problems and interpretation and observation techniques, as well as more specialized methods such as photography, mapping and tape recording. Repeatable up to six hours. Prerequisite: departmental consent.

820. Seminar in Physical Anthropology. (3). Analysis of fossil, skeletal and modern biological differences among people. Emphasizes methods and techniques of analysis with a consideration of current interpretive models. Prerequisite: Anthr. 556 or 557 or departmental consent.

837. Seminar in Cultural Anthropology. (3). Intensive study of advanced theoretical questions in cultural anthropology. Repeatable up to six hours. Prerequisite: five hours of anthropology.

847. Colloquium in Anthropology. (1-2). SLU grade only. Repeatable for a maximum of three hours. Seminar-style experience in recent research in all of the subfields of anthropology. Allows the student to present her or his research papers at professional conferences or to present them before a critical but friendly audience. Students presenting colloquium papers receive two credits. Prerequisite: graduate standing in anthropology.

848. Recent Developments in Anthropology. (3). A review of the latest discoveries and interpretations in the science of human beings. Repeatable up to six hours. Prerequisite: five hours of anthropology.

870. Independent Reading. (2-3). Repeatable up to six hours. Prerequisite: departmental consent.

875-876. Thesis. (2-2).

Biological Sciences

The biological sciences department offers a broad and flexible curriculum leading to the Bachelor of Arts (BA) or the Bachelor of Sciences (BS) degrees.

The department also participates in a field major in biochemistry which leads to a BS degree. All students who intend to pursue one of the programs within the Department of Biological Sciences should contact the department as early in their educational careers as possible for assignment to a faculty academic adviser.

Major. A major in biological sciences leading to the Bachelor of Arts (BA) requires at least 30 semester hours of biological sciences course work; up to 40 semester hours may be taken for credit. A major in biological sciences leading to the BS degree requires a minimum of 40 semester hours of biological sciences course work; up to 50 semester hours may be taken for credit. Candidates for either degree must complete Biol. 203Q, 204, 418, 500, 584, and either 305 or 534. Candidates for either degree must also complete two laboratory courses chosen from among Biol. 305, 535, 575, 591, or other laboratory recommended by their adviser. In addition, candidates for either degree must also complete two semesters of organic chemistry, typically Chem. 111Q and 112Q, and one semester of inorganic chemistry, typically Chem. 531. Candidates for the BS degree must also complete two semesters of physics. Candidates for either degree must maintain an overall grade point average of 2.00 in all biological sciences course work.

Minor. Candidates for a minor in biological sciences must complete Biol. 203Q, 204 and any three of the remaining core courses identified above. Candidates for the minor must also maintain a 2.00 grade point average in all biological sciences course work.

Biochemistry Field Major. The departments of biological sciences and chemistry participate jointly in this program. Required courses are: Biol. 203Q, 204, 500 and 584; Chem. 111Q, 112Q, 523, 531, 532, 662, 663 and 664; Phys. 213Q and 214Q, and Math. 112 or 111 and 123. Also required are Biol. 666 and 669 (two enrollments) which are cross-listed in the chemistry department, and 21 elective hours chosen from among those approved for the biochemistry field major (see academic adviser or departmental offices for approved courses).

Nonmajor Courses. The Department of Biological Sciences offers courses designed primarily to meet the needs of students in other departments. These are listed below as “Nonmajor Courses.” These courses, or their equivalents at other institutions, cannot be used to satisfy the biological sciences course work requirements for the major.

Nonmajor Courses

(May not be used to satisfy the requirements for the major)

Lower-Division Courses

104Q. Introducing Biology. (4). 3R 2L. A laboratory course introducing basic concepts of biological science including characteristics of living organisms, structure and function of organisms with emphasis on human beings, mechanisms of inheritance, and interactions of humans with living and nonliving components of various environments in the living world. The laboratory component of the course includes experiments and exercises designed to reinforce lecture presentations as well as provide elaboration of some subject areas. The course is designed for the nonscience major. Credit will not be given for both Biol. 104Q and 105G.

105G. The Human Organism. (3). 3R 2L. Divi­

cion C course elective. Introduces the non­

science major to certain biological principles as they relate to the human organism, provides biological information and understanding of subjects which are relevant to the student's own well-being and role as a world citizen and increases awareness of the human place in the biosphere. Supplemented and reinforced with a laboratory experience appropriate for the nonscience major and the course's theme. Credit earned in this course may not be
applied toward the requirements for a major or minor in biological sciences and credit is not given for both Biol. 104Q and Biol. 105G.


223. Human Anatomy and Physiology. (5). 4R; 2L. Presents the structure and function of the major human body systems. The course includes a laboratory component. Students who have completed Biol. 225 or 226 (both no longer offered) may not receive credit for prior enrollment in these courses and subsequent enrollment in Biol. 223. Students seeking to repeat Biol. 225 or 226 may enroll in this course, subject to the credit limitations indicated above. Prerequisites: Chem. 101G or 103Q or 111Q.

Upper-Division Courses

310. The Biology of Human Reproduction and Fetal Development. (4). The major goal of this course is to present biological information from the fields of anatomy, embryology, physiology, and endocrinology as it relates to human reproduction. Each topic is presented initially at an introductory level and developed subsequently to include the results of recent findings in each of the fields. Topics include: (1) the development and maturation of the reproductive tract; (2) reproductive endocrinology; (3) the anatomy and physiology of the male and female reproductive tracts; (4) the biology of fertilization, embryonic development, pregnancy, and lactation; and (5) the artificial control of reproductive potential. Prerequisite: Biol. 105G; 203Q or 225.

370Q. Ecology and Man. (3). Division C course/elective. Provides information which will allow the student to appreciate the complex relationship among the human population, natural resource use practices and pollution. Seeks to (1) provide a basis for interpreting (and acting upon) environmental problems through an understanding of basic ecological concepts; (2) engender a recognition of the difficulties encountered in solving environmental problems including those that are technologically uncomplicated; and (3) educate the student, as a responsible citizen, to the possibilities for meaningful input into the solution to such problems and to the importance of a basic knowledge in science, engineering, political science and economics. Students wishing to repeat Biol. 570 (no longer offered) should enroll in this course.

Courses for Graduate/Undergraduate Credit

509G. Foundations of Human Heredity. (4). Division C course/elective. Introduction to the mechanisms and social significance of genetic and constitutional factors. Credits can be applied toward the requirements for a major or minor in biological sciences and credit is not given for both Biol. 104Q and Biol. 105G.

518Q. Biology of Aging. (3). Cross-listed as Geron. 518Q. An introduction to the phenomenon of aging, including a survey of age-related processes and mechanisms of senescence emphasizing humans. Students earning graduate credit produce a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisite: junior standing.

519Q. Biology of Reproduction. (3). Cross-listed as Geron. 519Q. Emphasis on the biological and behavioral aspects of human reproduction. The basic reproductive processes of human males and females are described and the principles of infertility are discussed. Prerequisite: Biol. 204 and Chem. 112Q.

520. General Microbiology. (5). 3R; 4L. Introduction to the structure, function, systematics, ecology and population dynamics of microorganisms emphasizing pro- and eukaryotes. Prerequisites: Biol. 204 and Chem. 112Q.

418. The Biology of Ecosystems. (3). Principles underlying the interrelationships of living organisms and their environment from the biosphere to the population level of organization. Prerequisite: BioI. 204.

471. Wildlife Management. (4). 3R; 2L. Designed to present both theoretical and practical principles of wildlife management. Topics include wildlife legislation, ecological rules applicable to wildlife populations, procedures in habitat management, an introduction to wildlife restoration. Laboratory exercises and class projects will be conducted at local field sites. Emphasis on field analysis and restoration during the field portion. Prerequisites: Biol. 418.

481. Cooperative Education. (2-4). Course complements and enhances the student's academic program by providing an opportunity to apply knowledge gain during course work to job-related situations. For information contact the coordinator of undergraduate studies or the Cooperative Education program office. No more than four credit hours earned in BioI 481 may be applied toward satisfying the requirements for a major in biological sciences. Prerequisite: applicant and cooperative education position approved by the departmental affairs committee. Offered Cr/Nc only.

Courses for Graduate/Undergraduate Credit

500. Cell Physiology. (3). Bridges the gap between molecules and organisms by focusing on the function and the structure as it relates to function, of the basic units of life, cells. Includes a detailed treatment of individual cellular components and processes, the cytoskeleton, membrane transport control of gene expression, cell-cell communication and a consideration of cellular evolution. Also discusses the contemporary techniques used to study cells. Students earning graduate credit produce a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisite: Biol. 204 and Chem. 531.

502. Vascular Plants. (4). 2R; 6L. An introduction to the structure, reproduction and evolution of the major groups of living and extinct vascular plants. Includes an introduction to flowering plant systematics. Students earning graduate credit perform a primary literature survey on a topic selected in consultation with the instructor and deliver a 30-minute oral presentation to the class. Prerequisite: Biol. 204.
503. Taxonomy and Geography of Flowering Plants. (4). An introduction to the principles and methods of plant taxonomy and to the study of the patterns of plant distribution and the origin of these patterns. Class time is divided among lectures, laboratories and field work. Field trips throughout Sedgwick County and to the Flint and Chautauqua Hills provide an opportunity to collect specimens and to observe ecology and distribution of native species of flowering plants. Prerequisite: Biol. 204 or instructor's consent.

524. Vertebrate Zoology. (4). 2R; 4L. Evolution, distribution, systematics, natural history and special characters of vertebrate animals. Students earning graduate credit produce a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisite: Biol. 204. Biol. 527 also is recommended.

527. Comparative Anatomy. (5). 3R; 4L. An intensive study of representative chordates emphasizing vertebrate anatomy. Students earning graduate credit complete additional assignments chosen in consultation with the instructor, such as a term paper based on technical literature, dissection of additional animals, etc. Prerequisite: Biol. 204.

528. Parasitology. (3). 2R; 4L. The parasites of man and other vertebrate hosts. Students earning graduate credit produce a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisite: Biol. 204.

531. Food Microbiology. (4). 2R; 4L. Examines the role and significance of microorganisms in foods. Includes factors that affect microbial growth; detection of microbes and their products; food spoilage; food preservation by use of chemicals, radiation, high and low temperature, drying and fermentation; food-borne microbial infections and intoxications; and the microbial basis of food sanitation, control and inspection. Students earning graduate credit produce a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisite: Biol. 204.

532. Entomology. (6). 3R; 4L. An introduction to the morphology, physiology, life cycles, behavior, ecology and economic significance of insects. Students earning graduate credit produce a term paper based on the technical literature on a topic chosen in consultation with the instructor or develop proficiency in a specific taxon by performing an individual systems project. Prerequisite: Biol. 204.

533. Mammalian Physiology Laboratory. (3). 4L. An empirical approach to mammalian physiology. Students seeking graduate credit submit an additional laboratory report relating the results of a laboratory experiment to those found in the current technical literature. Prerequisite: concurrent or prior enrollment in Biol. 534.

540. Comparative Embryology. (4). 2R; 4L. Gametogenesis, fertilization and developmental processes in animals emphasizing vertebrates. Students earning graduate credit complete additional assignments chosen in consultation with the instructor. Prerequisite: Biol. 204. Biol. 527 also is recommended.

544. Histology. (4). 2R; 4L. The microscopic anatomy of vertebrate tissues emphasizing mammals. Students earning graduate credit complete additional assignments chosen in consultation with the instructor. Prerequisite: Biol. 204.

552. Mycology. (4). 2R; 4L. The structure, development and reproduction of fungi emphasizing the cytology and physiology of forms of scientific and economic importance. Students earning graduate credit produce a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisite: Biol. 204.

560. Plant Ecology. (4). 2R; 6L. Principles and patterns of plant distribution and of adaptation of plants to particular habitats. Emphasizes the experimental approach to plant ecology. Field trips are an integral part of the laboratory. Prerequisite: Biol. 204.

573. Statistical Applications in Biology. (3). Supplements Stat. 370 by providing experience with practical applications of statistical theory to biological data. Includes computations on data derived from both the primary literature and independently designed research projects. Emphasizes the design of experiments to answer specific hypotheses, the treatment of non-normally distributed data sets and nonhomogeneous experimental test units and the use of packaged computer programs for certain statistical tests. Access to calculators with at least two memory banks is strongly encouraged. Students earning graduate credit complete an additional statistical analysis assignment involving the use of the computing facilities. Prerequisites: Stat. 370.

575. Field Ecology. (3). 9L. Techniques for analysis of systems consisting of living organisms and their environments. Field trips are required. Students earning graduate credit perform an individual project on comparative community structure and report the results as a technical paper. Prerequisite: instructor’s consent.

578. Limnology. (5). 2R; 6L. Introduction to the biological and physical processes that operate in lakes, streams and estuaries. Requires assigned readings, individual projects and field trips. Students earning graduate credit investigate the limnological properties of two ponds, comparing their characteristics, or investigate a specific taxon or trophic level in a lake. The results of this investigation are reported as a technical paper. Prerequisites: Biol. 204 and instructor's consent.

584. Genetics. (4). The mechanisms of heredity and variation in plants and animals with a critical review of the concept of the gene. Students seeking graduate credit complete reading assignments in the technical literature resulting in several written reports or a comprehensive term paper chosen in consultation with the instructor. Prerequisite: Biol. 204.

590. Immunobiology. (3). The nature of antigens and antibodies and their interactions. Includes cellular and humoral aspects of immune response and immunomodulators. Students earning graduate credit prepare a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisites: Biol. 204 and Chem. 531.

591. Immunobiology Laboratory. (3). 6L. Methods of immunization and techniques for qualitative and quantitative determinations of antibody production and antigen-antibody reactions. Students earning graduate credit prepare a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisites or corequisites: Biol. 590, Chem. 531 or instructor’s consent.

610. Topics in Botany. (2-4). No more than a total of six credit hours earned from among Biol. 610, 640 and 660 may be applied toward major and graduation requirements. Students must complete a Directed Independent Study Abstract form and obtain departmental approval prior to enrollment. Prerequisite: Biol. 204 and instructor’s consent.

630. Behavioral Ecology. (3). A study of the biological basis of social behavior, stressing the underlying evolutionary and ecological mechanisms. Lectures will examine altruism and kin selection, kin recognition mechanisms, sexual behavior, sexual selection and mate choice, mating systems, and reproductive strategies from the perspective of natural selection. Students earning graduate credit will be expected to write a term paper based on the technical literature and to present this in a class seminar. Prerequisite: Biol. 418.

640. Topics in Zoology. (2-4). See Biol. 610. Prerequisite: Biol. 204 and instructor’s consent.

654. Pathogenic Microbiology. (4). 2R; 4L. An introduction to the important pathogenic microorganisms and their relationships to health and disease in humans. Students earning graduate credit prepare a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisite: Biol. 330.

658. Microbial Physiology. (3). The physiology and metabolism of microorganisms. All students prepare a term paper based on the technical literature on a topic chosen in consultation with the instructor, and those earning graduate credit make an oral presentation on this topic to the class. Prerequisites: Biol. 330 and Chem. 531.

659. Microbial Physiology Laboratory. (3). 6L. An introduction to the basic techniques involved in the study of microbial physiology. Students earning graduate credit design and
perform an additional experiment in consultation with the instructor and present the results in written form using the format of a scientific journal in consultation with the instructor. Prerequisites: Biol. 330 and Chem. 531.

660. Topics in Microbiology. (2-4). Lab fee. See Biol. 610. Prerequisite: Biol. 330 and instructor’s consent.

666. Special Topics in Biochemistry. (3). Primarily for students who choose the biochemistry field major. Discusses a small number of current problems in biochemistry in depth. Requires reading published research papers in the field. Students earning graduate credit produce a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisites: Biol. 206, Chem. 662 and 663.

669. Research in Biochemistry. (2). Cross-listed as Chem. 669. S/U grade only. Primarily for students who choose the biochemistry field major. Requires participation in a biochemistry research project under the direction of a faculty member and a written report summarizing the results. May be repeated once for credit. Prerequisites: Biol. 500, Chem. 662 or 663 and Chem. 664 and instructor’s consent.

750. Biology Workshop. (1-3).

756. Microbial Genetics. (4). The relationship between development, metabolism and genetics in microorganisms. Students earning graduate credit prepare a term paper on the technical literature on a topic chosen in consultation with the instructor. Prerequisites: Biol. 330 and 530 or departmental consent.

771. Evolutionary Ecology. (4). 3R; 2L. Presents a synthesis of basic principles in population genetics and ecology as a framework for the study of topics in evolutionary ecology. Emphasizes (1) the maintenance and structure of population level genetic variation; (2) mating structure and the evolutionary advantages of sex; (3) individual, kin, group selection; (4) population demographic structure; (5) population regulation and dispersal; (6) life history strategies in heterogeneous environments; and (7) demographic and genetic covariance. Teaches basic techniques in population ecology on several short field trips throughout the semester. Prerequisite: Biol. 384. Biol. 418 also is recommended.

780. Molecular Genetics. (3). Studies of the physiobiochemical nature of genetic material and the mechanisms of genetic regulation of metabolism. Students earning graduate credit produce a term paper and deliver a class seminar based on the technical literature on a topic chosen in consultation with the instructor. Prerequisite: Biol. 584 or instructor’s consent.

790. Advanced Immunology. (3). Contemporary problems in immunologic research. Includes lectures, assigned readings and reports. Students earning graduate credit produce a term paper based on the technical literature on a topic chosen in consultation with instructor. Prerequisites: Biol. 590 and instructor’s consent.

798. Biology Seminar. (2). Reviews of current research in biological sciences. Repeatable once for credit.

Courses for Graduate Students Only

690. Research. (2-5). S/U grade only. Students pursuing research on their thesis projects should enroll for an appropriate number of hours. An oral presentation of the research results must be presented to the student’s thesis committee before a grade is assigned.

981. Thesis. (2). S/U grade only. Students must be enrolled in this course during the semester in which the thesis is defended.

Chemistry

The chemistry department offers a broad and flexible curriculum leading to a variety of degrees and options: Bachelor of Science (BS) in chemistry, Bachelor of Science in chemical science, Bachelor of Science in chemistry—chemical physics option, Bachelor of Arts (BA) in chemistry, biochemistry field major (BS) and chemistry/business field major (BS).

Bachelor of Science in Chemistry. This program requires Chem. 302, 515, 521, 544, 546, 547 and 615 and their necessary prerequisites, including Math. 344 and Phys. 313, 314, 315 and 316 or their equivalents. An additional eight credit hours of professional elective courses must be taken. At least two credit hours of these courses must be selected from chemistry courses above 610 (701 is excluded). Courses that will satisfy the professional elective requirement are: (a) Chem. 690 and 669; (b) most elective chemistry courses above 600; (c) numerical methods: Chem. 602, Math. 551, CS 501; (d) electronics: Chem. 625 and 725, EE 492; (e) mathematics courses with the instructor. Prerequisites: BioI. 330 and Chern. 531, 532, 544 and instructor’s consent.

Bachelor of Arts in Chemistry. This degree requires Chem. 524, 532, 544 and 547 and the necessary prerequisites, including Math. 344 and one year of physics; six additional credit hours of chemistry courses numbered above 500 (Chem. 605 is recommended) and ten credit hours of BioI. 203Q and 204Q.

This program is designed for students not expecting to become professional chemists and therefore does not necessarily meet standards of certification by the American Chemical Society or entry requirements for graduate work in chemistry.

Bachelor of Arts in Chemistry. This degree requires Chem. 524, 532, 544 and 547 and the necessary prerequisites, including Math. 344 and one year of physics or their equivalents. Students with a substantial interest in the biological sciences may satisfy the BA requirements by substituting Chem. 662 and 664, or Chem. 663, for Chem. 524 (then Chem. 523 is required) or by substituting Chem. 662 or 663 for Chem. 546.

Students who meet the requirements of the BA program may be certified by the American Chemical Society if they take Chem. 514, 524, 546 and 615 and six hours of professional development courses. Students planning to become teachers should consult with an adviser for details.

Bachelor of Science in Chemistry—Chemical Physics Option. Students may elect to participate in this option, which is a joint program with the Department of Physics. Students participating in this option are expected to satisfy the regular BS in chemistry requirements and take six credit hours of upper-division physics courses from Phys. 551, 621, 631, 612 and 714 or other approved courses. All students must take Chem. 642.

Students completing this option are eligible for certification by the American Chemical Society.

Bachelor of Science in Chemical Science. Students in premedical, predental, pre-veterinary, prepharmacy, preoptometry or other preprofessional programs may desire this option for which the following courses are required: Chem. 514, 524, 532 and 663 and their necessary prerequisites; Math. 144 or 242Q and one year of physics; six additional credit hours of chemistry courses numbered above 500 (Chem. 605 is recommended) and ten credit hours of BioI. 203Q and 204Q.

This program is designed for students not expecting to become professional chemists and therefore does not necessarily meet standards of certification by the American Chemical Society or entry requirements for graduate work in chemistry.

Biochemistry Field Major. The department of biological sciences and chemistry participate jointly in this program. Students selecting this major should seek the advice of one of the departmental chairpersons as early as possible. The required courses are: Biol. 203Q, 204, 500 and 584; Chem. 111Q, 112Q, 523, 531, 532,
662, 663 and 664; Phys. 213Q and 214Q, and Math. 112 or 111 and 123. Also required are Chem. 666 and 669 (two enrollments), which are cross-listed in the Department of Biological Sciences, and 21 hours of biochemistry electives.

Chemistry/Business Field Major. The Charles M. Bues program in chemistry/business is designed for students who wish to pursue careers in chemical sales, management, advertising and other related areas. This program requires 30 hours of business courses as follows: Acct. 210 and 220; Econ. 201Q and 202Q; B. Law 435; Fin. 340; Mgmt. 360, and Mkt. 300, 405 and 608. In addition, approximately 30 hours of chemistry and mathematics are required: Chem. 111Q, 112Q, 523, 561 or 662, 531, 532 and 603 and Math. 144 or 242Q.

Students selecting this option should contact the chairperson of the Department of Chemistry as early as possible for advice.

Minor. The chemistry minor consists of at least 14 hours of chemistry courses and must include at least four hours from Chem. 514, 523, 531 and 545. A 2.000 GPA is required.

Advising. All students pursuing one of the above degrees should consult closely with the Department of Chemistry in planning their program. Students should plan to begin required physical chemistry courses during their junior year (see below), thereby requiring that physics and calculus prerequisites be taken earlier. Some courses are not offered on a regular basis. Students should consult advisors.

Minimum Requirements

Bachelor of Science

Course

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chem. 111Q, 112Q</td>
<td>10</td>
</tr>
<tr>
<td>Chem. 302</td>
<td></td>
</tr>
<tr>
<td>Chem. 503</td>
<td>1</td>
</tr>
<tr>
<td>Chem. 514</td>
<td>3</td>
</tr>
<tr>
<td>Chem. 531, 532</td>
<td>10</td>
</tr>
<tr>
<td>Chem. 523, 524</td>
<td>8</td>
</tr>
<tr>
<td>Chem. 545, 546</td>
<td>6</td>
</tr>
<tr>
<td>Chem. 547</td>
<td>2</td>
</tr>
<tr>
<td>Chem. 613</td>
<td></td>
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<td>Chem. 615</td>
<td>3</td>
</tr>
<tr>
<td>Chem. 610-800</td>
<td>2</td>
</tr>
<tr>
<td>Phys. 313Q, 314Q, 315Q, 316Q</td>
<td>10</td>
</tr>
<tr>
<td>Math. 112, 242Q, 243, 344</td>
<td>18</td>
</tr>
</tbody>
</table>

**Part of the required eight hours of professional elective courses (see description above).**

## Recommended Course Sequence

**Fall courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chem. 111Q, General Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>Math. 112, Precalculus Math.</td>
<td>5</td>
</tr>
</tbody>
</table>

**Spring courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chem. 112Q, General and Inorganic Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>Math. 242Q, Calculus</td>
<td>5</td>
</tr>
</tbody>
</table>

**Sophomore**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chem. 302, Microcomputing for Chemists</td>
<td>1</td>
</tr>
<tr>
<td>Chem. 531, Organic Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>Math. 243, Calculus II</td>
<td>2</td>
</tr>
<tr>
<td>Phys. 313Q, University Physics</td>
<td>4</td>
</tr>
</tbody>
</table>

**Junior**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chem. 514, Inorganic Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>Chem. 523, Analytical Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>Phys. 316Q, University Physics Lab I</td>
<td>1</td>
</tr>
<tr>
<td>Math. 344, Calculus III</td>
<td>3</td>
</tr>
</tbody>
</table>

**Spring courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chem. 545, Physical Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>Chem. 505, Chemical Literature</td>
<td>1</td>
</tr>
<tr>
<td>Chem. 524, Instrumental Methods of Chemical Analysis</td>
<td>4</td>
</tr>
<tr>
<td>Biological science</td>
<td>3</td>
</tr>
</tbody>
</table>

**Senior**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chem. 546, Physical Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>Chemistry course above 610</td>
<td>4</td>
</tr>
<tr>
<td>Professional elective</td>
<td>3</td>
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</tbody>
</table>

**Spring courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chem. 615, Advanced Inorganic Chemistry</td>
<td>2</td>
</tr>
<tr>
<td>Chem. 547, Physical Chemistry Laboratory</td>
<td>2</td>
</tr>
<tr>
<td>Chem. 613, Inorganic Chemistry Laboratory</td>
<td>2</td>
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</tbody>
</table>

Bachelor of Arts

**Course**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chem. 111Q, 112Q</td>
<td>10</td>
</tr>
<tr>
<td>Chem. 531, 532</td>
<td>10</td>
</tr>
<tr>
<td>Chem. 523, 524**</td>
<td>8</td>
</tr>
<tr>
<td>Chem. 545, 546**</td>
<td>6</td>
</tr>
<tr>
<td>Chem. 547</td>
<td>2</td>
</tr>
<tr>
<td>Physics (one year)</td>
<td>10</td>
</tr>
<tr>
<td>Math. 112, 242Q, 243, 344</td>
<td>18</td>
</tr>
</tbody>
</table>

**Bachelor of Science in Chemical Science**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
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</thead>
<tbody>
<tr>
<td>Chem. 111Q, 112Q</td>
<td>10</td>
</tr>
<tr>
<td>Chem. 531, 532</td>
<td>8</td>
</tr>
<tr>
<td>Chem. 662, 663</td>
<td>10</td>
</tr>
<tr>
<td>Chem. 500-800 (605 recommended)</td>
<td>6</td>
</tr>
<tr>
<td>Math. 144 or 242Q</td>
<td>3-5</td>
</tr>
<tr>
<td>Physics (one year)</td>
<td>10</td>
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</tbody>
</table>

**Biochemistry Field Major**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
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</thead>
<tbody>
<tr>
<td>Chem. 111Q, 112Q</td>
<td>10</td>
</tr>
<tr>
<td>Chem. 531, 532</td>
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<tr>
<td>Chem. 523</td>
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<tr>
<td>Chem. 531, 532</td>
<td>10</td>
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<tr>
<td>Chem. 561 or 662</td>
<td>3</td>
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<tr>
<td>Chem. 562, 663</td>
<td>3</td>
</tr>
<tr>
<td>Math. 112 or 111, 123</td>
<td>5-6</td>
</tr>
<tr>
<td>Phys. 213Q, 214Q</td>
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**Biochemistry electives**

<table>
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<tbody>
<tr>
<td>Chem. 111Q, 112Q</td>
<td>10</td>
</tr>
<tr>
<td>Chem. 531, 532</td>
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<td>Chem. 531, 532</td>
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<tr>
<td>Chem. 561 or 662</td>
<td>3</td>
</tr>
<tr>
<td>Chem. 562, 663</td>
<td>3</td>
</tr>
<tr>
<td>Math. 112 or 111, 123</td>
<td>5-6</td>
</tr>
<tr>
<td>Phys. 213Q, 214Q</td>
<td>10</td>
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</table>

**Chemistry/Business Field Major**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
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</thead>
<tbody>
<tr>
<td>Chem. 111Q, 112Q</td>
<td>10</td>
</tr>
<tr>
<td>Chem. 531, 532</td>
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<tr>
<td>Chem. 531, 532</td>
<td>10</td>
</tr>
<tr>
<td>Chem. 561 or 662</td>
<td>3</td>
</tr>
<tr>
<td>Chem. 562, 663</td>
<td>3</td>
</tr>
<tr>
<td>Math. 112 or 111, 123</td>
<td>5-6</td>
</tr>
<tr>
<td>Phys. 213Q, 214Q</td>
<td>10</td>
</tr>
</tbody>
</table>

## Lower-Division Courses

101G. The Science of Chemistry. (3). Division C course/elective. Teaches the basic concepts of chemistry that will aid in understanding the physical world. No attempt to teach basic computational or laboratory skills; instead emphasizes such concepts as atomic and molecular theory, energy, structures and theories regarding why reactions occur.

103Q. General Chemistry. (5). 3R; 4L Lab fee. Division C course/elective. A survey of inorganic, organic, nuclear and biological chemistry. Recommended for the student who plans to take only one course in chemistry. Students who expect to major in the natural sciences should take the Chem. 111Q-112Q sequence.
547. Physical Chemistry Laboratory. (2). Lab fee. Physical chemistry experiments that illustrate principles learned in Chem. 545 and 546. Prerequisite: Chem. 545 or 546.

561. Introduction to Biochemistry. (3). A brief history of biochemistry, emphasizing the development of molecular biology, chemistry of biomolecules—proteins, carbohydrates, lipids, nucleic acids and vitamins, molecular basis of bioenergetics and metabolism and storage, transfer and control of genetic information. Course meets the needs of students from health related programs and science education curricula. Prerequisite: Chem. 531 or 533 or one semester of organic chemistry.

601. Numerical Methods. (2). Application of numerical methods to problems in chemistry and physics. Roots of equations; curve fitting; interpolation, extrapolation, and smoothing of experimental data; numerical differentiation and integration; and computer programming. Prerequisite: instructor’s consent.

603. Industrial Chemistry. (3). Bridges the industrial-academic gap. Includes petroleum chemistry, and materials and processes in industrial inorganic chemistry. Also discusses some aspects of environmental chemistry such as hazardous and nuclear waste disposal and air pollution. Topics in polymer chemistry include major synthetic routes to high polymers and chemistry and major processes in industrial technology in plastics and composites processing. Prerequisite: Chem. 532 or concurrent enrollment.

605. Medicinal Chemistry. (3). For students interested in chemistry related to the design, development and mode of action of drugs. The primary purpose of the course is to describe those organic substances that are used as medications and to explain the mode of action and chemical reactions of drugs in the body; to illustrate the importance and relevance of chemical reactions as a basis of pharmacological activity, drug toxicity, allergic reactions, carcinogenicity, etc.; and to bring about a better understanding of drugs. Includes transport, basic receptor theory, metabolic transformation of drugs, discussion of physical and chemical properties in relation to biological activity, drug design, structure-activity relationships and discussion of a select number of organic medicinal agents. Prerequisites: Chem. 532 or 533 or equivalent; a semester of biochemistry (Chem. 561 or 662) and a year of biology are strongly recommended.

613. Inorganic Chemistry Laboratory. (2). Lab fee. Experimental methods of inorganic chemistry. Prerequisite: Chem. 514 or concurrent enrollment.

615. Advanced Inorganic Chemistry. (3). Includes modern bonding theories, structure and spectra of inorganic compounds, coordination and organometallic chemistry, boranes, inorganic ring systems and polymers, inorganic environmental chemistry, mechanisms of inorganic reactions and solid state chemistry. Prerequisite: Chem. 514 and 546.

625. Electronics. (2). Lab fee. Provides a
working knowledge of electronic devices and circuits for the student or research worker who has little or no background in electronics. Prerequisite: Instructor’s consent.

641. Advanced Physical Chemistry. (3). Introduction to quantum chemistry, atomic and molecular spectra, statistical thermodynamics and reaction rate theory. Prerequisite: Chem. 546.

642. Chemical Physics. (3). Topics in areas of overlapping interest for students of chemistry and physics: such as thermodynamics, kinetics, quantum mechanics, solids and various types of spectroscopy. A team of chemists and physicists discusses standard experimental and theoretical techniques used in research in chemical physics. Prerequisite: Chem. 641 or instructor’s consent.

662. Biochemistry of Cell Constituents, Catalysis, Oxidation, Photosynthesis. (3). Study of major constituents of the cell: protein, carbohydrate, glycoprotein, lipid, nucleic acid, nucleoprotein; enzyme catalysis; biological oxidations; photosynthesis; and introduction to intermediary metabolism. A fundamental background of biology or microbiology is recommended but not essential. Biochemistry field majors should enroll concurrently in Chem. 664. Prerequisite: Chem. 523 and 532 or equivalents.

663. Biochemistry of Cell Metabolism, Biosynthesis, Structure, Function and Regulation of Proteins and Nucleic Acids. (3). Study of metabolism and control of carbohydrates, lipids, phosphoglycerides, sphingolipids, sterols, amino acids and proteins; synthesis of porphyrins, amides and polyamines; synthesis and metabolism of purines, pyrimidines and vitamins; body fluids and generalized tissues. A fundamental background of biology or microbiology is recommended but not essential. Prerequisite: Chem. 662.

664. Biochemistry Laboratory. (3) LR; 6L. Lab fee. Practical training in biochemical procedures and literature searching; experiments include isolation, characterization and assay of biomolecules and use of centrifugation, chromatography, electrophoresis, spectrophotometry, enzyme kinetics and radioactive labeling techniques. Should be taken concurrently with Chem. 662 or Chem. 663. Prerequisite: Chem. 532 or equivalent.

666. Special Topics in Biochemistry. (3). (Offered spring semester in odd-numbered years.) Discusses a small number of current problems in biochemistry in depth. Requires reading of published research in the field. Prerequisites: Biol. 204 and Chem. 662 and 663.

669. Research in Biochemistry. (2). Cross-listed as Biol. 669. S/U grade only. Students in the biochemistry field major participate in a biochemistry research project under the direction of a faculty member. Requires a written report summarizing the results. May be repeated once for credit. Prerequisites: Biol. 500 and Chem. 662 or 663 and 664.

700. Chemistry Seminar. (1). S/U grade only. Students give seminars on either papers recently published in the literature or on their own research. Repeatable for credit.

701. Chemistry Colloquium. (1). S/U grade only. Speakers for the colloquium consist of outstanding chemists from other institutions and faculty. Repeatable for credit.


709. Special Topics in Chemistry. (2-3). A discussion of topics of a special significance and interest to faculty and students. Offerings announced in advance. Repeatable for credit.

712. Coordination Chemistry. (3). The study of the synthesis, characterization and properties of coordination compounds. Includes nomenclature, fundamental bonding concepts, principles of synthesis, mechanisms of substitution and electron transfer reactions, catalysis and solid-state phenomena. Prerequisite: Chem. 615 or equivalent.

732. Advanced Organic Synthesis. (3). Discussion of modern synthetic methods in organic chemistry including carbon-carbon forming reactions, oxidation and reduction reactions, protective groups and organometallic chemistry. Prerequisite: Chem. 532.


741. Quantum Chemistry. (3). Theoretical basis of atomic and molecular structure. Includes the postulates of quantum mechanics, exact solutions for the particle-in-a-box and the hydrogen atom, variation and perturbation techniques, electron spin, Hartree-Fock and configuration-interaction methods, molecular-orbital and valence-bond wavefunctions and virial and Helmmann-Feynman theorems. Prerequisite: Math. 344 or equivalent. Corequisite: Chem. 705 or equivalent.

751. Chain Growth Polymerization. (3). Mechanisms, kinetics and thermodynamic aspects of polymerization processes which proceed by a chain growth mechanism, free radical, anionic, cationic and Zeigler Natta and group transfer polymerization. Prerequisites: Chem. 531 and 545.

752. Step Growth Polymerization. (3). Polymerization process which proceed by a step growth or ring-opening mechanism. Preparation of thermoplastics, including relationships between molecular weight and reaction conditions. Preparation of thermosets including relationships between structure, conversion and gelation. Discusses individual systems such as nylons, epoxy resin and polyamides in some detail. Prerequisites: Chem. 531 and 545.

764. Physical Biochemistry I: Principles. (3). An examination of the physical principles that form the basis for the structure and activity of biological macromolecules, includes the conformational analysis of molecular building blocks and its relation to the higher order structures of proteins, nucleic acids, lipids and carbohydrates, energetics and bonding interactions, solution thermodynamics, elementary treatment of chain statistics and macromolecular flexibility, transport processes and multiple binding equilibria. Prerequisites: Chem. 549, 546 and 662 or equivalent.

Courses for Graduate Students Only

809. Special Studies in Chemistry. (2-3). Systematic study in selected areas of chemistry. Repeatable for credit. Course content differs from one offering to the next.

874. Organometallic Chemistry. (3). A study of the synthesis, structure, bonding, reactivity and industrial applications of organotransition and nontransition metal compounds. Prerequisite: Chem. 615 or equivalent.

875. Inorganic Chemistry. (3). The study of the role of inorganic chemistry in biological systems. Includes electron transport, biological catalysis mediated by metal ions, metal storage and transport, ion transport and the role of transition metals in metabolism. Prerequisites: Chem. 615 and 663 or equivalents.

821. Equilibrium and Statistics in Analytical Chemistry. (3). Covers homogeneous and heterogeneous solution equilibrium calculations and statistical methods used in experiment design and data analysis. Prerequisite: Chem. 524 or equivalent.

822. Analytical Separations. (3). The theory and practice of analytical separation methods including gas and liquid chromatography, ion exchange and electrophoresis. Prerequisite: Chem. 524 or equivalent.

823. Analytical Spectroscopy. (3). Absorption (UV visible, IR and atomic); emission; flame emission and atomic absorption spectroscopy, molecular fluorescence and phosphorescence methods; Raman, nuclear magnetic resonance and electron spin resonance spectroscopy; X-ray methods. Lecturing and discussions on the theory and practice. Particular emphasis on instrumentation and the acquisition of artifact-free data. Prerequisite: Chem. 524 or equivalent.

824. Electroanalytical Chemistry. (3). Includes voltammetry, polarography, chromatography, spectrophotometric and electrochemical methods. Discussion of individual systems and irreversible diffusion controlled processes; CE (chemical reaction before electrical reaction).
perturbation theory, vibration and rotation of diatomic molecules, vibration and rotation of polyatomic molecules, electronic spectra and magnetic resonance spectroscopy. Prerequisites: Chem. 741 or its equivalent and Chem. 705 or its equivalent.

847. Chemistry of Condensed Matter. (3). Includes thermodynamics, statistical mechanics, quantum chemistry and structural determinations of condensed phase matters. Emphases sizes metals, alloys, intermetallic compounds, composite materials and advanced materials. Prerequisites: Chem. 741 and 745 or equivalents.

852. Techniques of Polymer Characterization. (3). A study of physical, spectroscopic and diffraction techniques to determine the size, structure and morphology of polymers.

853. Polymer Properties. (3). Kinetics and thermodynamics of the crystallization process and the influence of sample history on the gross morphology of the crystallites. Structural features which preclude the development of polymer crystals and encourage amorphous character, relationships between structure, Tm and Tg, theoretical strengths of materials, the time-dependent mechanical behavior of polymers and the Maxwell and Voigt models of viscoelasticity. The Boltzmann superposition principle and how it can be used to predict creep behavior, mechanisms of deformation, yielding and fracture in polymers. Prerequisite: degree in chemistry or related subject.

861. Enzyme Mechanisms. (3). An introduction to the study of enzyme mechanisms. Modern approaches include steady-state, relaxation and chemical modification methods. Prerequisite: Chem. 705 or 741 or equivalent.

862. Biotechnology: Principles and Applications. (3). Presents a broad informed view of contemporary biotechnology including its role in the production of premium products from biological raw materials. Biotechnology involves the production of products such as food, drug, flavors, chemicals, biopolymers, medicines and agricultural materials. Prerequisites: Biol. 203 and 204 or Chem. 662 or 663 or equivalent.

863. Analytical Biochemistry. (3). A review of modern analytical methods used in biochemistry and molecular biology including absorbance and fluorescence spectroscopy, chromatography (affinity, gel-filtration, HPLC, ion-exchange, ion-pair), gel electrophoresis, radiation tracer techniques, segmenting and recombinant DNA procedures. Prerequisites: Biol. 203 and 204 or Chem. 662 or 663 or equivalents.

864. Physical Biochemistry II: Techniques. (3). An examination of the physical techniques used to study the structure, properties and reactions of biological molecules and macromolecules. Includes vibrational and electronic spectroscopy, scattering of radiation, nuclear and electron magnetic resonance, sedimentation and electric field techniques. Uses examples from the research literature throughout to illustrate specific applications.

980. Research In Chemistry. (2-12). S/U grade only. Research for the student planning to receive an MS. Research is directed by a faculty member. Repeatable for credit.

990. Research in Chemistry. (2-16). S/U grade only. Research for the student planning to receive the PhD. Research is directed by a faculty member. Repeatable for credit.

Chinese
See Modern and Classical Languages and Literatures.

Communication, Elliott School of
The Elliott School of Communication offers an integrated major in communication leading to the Bachelor of Arts (BA) degree. Students can either choose a structured emphasis in advertising, electronic media, journalism, public relations, or speech communication or develop a special (open) emphasis that is more responsive to their background and experience and consistent with their educational and professional goals and objectives.

This comprehensive communication degree consolidates former degree programs in journalism, speech communication, and radio-television-film. It has three distinguishing characteristics:

1. It is interdisciplinary in nature, reflecting the contemporary belief that all media of communication are engaged in essentially the same functions (gathering information and creating and disseminating messages) and that the present-day communication profession must be schooled in the basic skills—writing, speaking, and visual communication—and develop the ability to plan, organize, evaluate, and think strategically. Founded on the principle that communication specialists should also be communication generalists, this degree program combines disciplinary strengths in an interdisciplinary matrix.

2. It is consistent with the mission of The Wichita State University to offer programs that are responsive to the needs of the urban community that the University serves. The Kansas communication industry has its focus in Wichita, the major media center of the state.

3. Its location allows the program and its students to take fuller advantage of the communication opportunities afforded by the largest city in Kansas. The region of the state served by WSU includes one public and four commercial television
stations, more than 15 radio stations, nine daily and 32 weekly newspapers, more than 25 advertising agencies, and a range of international, national, regional, and local industries, businesses, and public agencies, many with substantial communication operations. This setting allows students to combine academic and professional interests in a program that matches precept with example, education with experience.

Degree Requirements

Outside Requirements. All students in the communication major must complete a minimum of 84 credits outside of communication. These credits include the general education requirements plus the following three specific courses in an outside concentration:

- ArtG 210, Visual Communication;
- Mgmt 101G, Introduction to Business; and
- Mkt 300, Marketing.

Major. Students majoring in communication must maintain a 2.5 grade point average (overall and in the major), complete a minimum of 33 credits in communication, including 18 credits in the communication core, and submit a portfolio of their work before their senior year (see portfolio requirement below). All students must take 130Q, 301, 325, and 635. Their choice of two courses from 430, 630, and 631 will vary depending on the structured emphasis area they choose. At least 15 credits must be in either a structured or an open emphasis area. Specific course requirements in the emphasis areas are as follows:

a. Advertising. Communication Core: 130Q, 301, 325, 535, and two courses from 430, 630, 631. Emphasis Area: 324, 510, 525, 526, 626, 627. In addition, students in this emphasis must complete Mkt 405, 607, and one course from Mkt 403, 407, 608, or Pay 304.

b. Electronic Media. Communication Core: 130Q, 301, 325, 535, and two courses from 430, 630, 631. Emphasis Area: 204 and two courses from 214, 304, 530, 604, 609; one upper division writing class beyond Comm 301 in journalism, broadcast news, public relations, or advertising, depending on the student's needs and interests; and one related course in communication selected in consultation with an adviser.

c. Journalism. Communication Core: 130Q, 301, 325, 535, 630, and 631. Emphasis Area: 401, 500, 510, 240, plus at least one course from a list of 12 specific courses in communication (a copy of this listing is available in the main office or from any faculty adviser). Note: Students interested in broadcast journalism can substitute courses in the journalism emphasis with 401, 422, 522, 622, and one related course in communication selected in consultation with a faculty adviser.

d. Public Relations. Communication Core: 130Q, 301, 325, 430, 535, and 630. Emphasis Area: 350, 502, 510, 625, and at least one additional upper division communication course. Students are also encouraged to supplement work in this emphasis by selecting courses from a list of nine additional courses in marketing, management, and communication (a copy of this listing is available in the main office or from any faculty adviser).

e. Speech Communication. Communication Core: 130Q, 301, 325, 430, 535, and 631. Emphasis Area: At least 18 credits in communication selected from a list of 15 courses (a copy of this listing is available in the main office or from any faculty adviser). Students can substitute courses listed for the emphasis area by selecting groupings of courses in political communication or organizational communication in consultation with a faculty adviser.

f. Open Emphasis. Communication Core: 130Q, 301, 325, 535, and two courses from 430, 630, 631. Emphasis Area: Students can develop and propose an open emphasis more appropriate for their interests and needs and respectful of their backgrounds and experience. These proposals must be developed by students in consultation with a faculty adviser, be substantially different from the structured emphasis available, and be coherent and justifiable to a faculty committee, which will review and act on these proposals at specified times during the academic year.

Minor. A minor in communication consists of two courses from the communication core plus at least 12 hours of electives in communication (six hours must be at the 300 level or above) chosen with the approval of a faculty adviser.

Admission Requirements

Students planning to pursue a major in communication must make formal application for admission to major status. This usually is done during the sophomore year. To be admitted, applicants must: be students in Fairmount College of Liberal Arts and Sciences; have an overall grade point average of 2.5 or better; pass a standardized English Proficiency Test; and file an Application for Admission to Major Status form with the Elliott School of Communication. Additional information regarding the application process and procedures is available from the main office of the Elliott School.

Advising Requirements

Students will be assigned a faculty advisor on admission to major status and will be required to meet with that advisor at least once a semester while they are enrolled. The undergraduate coordinator will advise all pre-majors in communication to help students understand and attempt to meet the Requirements for Admission to Major Status in Communication (see Admission Requirements above). Students admitted to major status will be assigned a faculty adviser who will help them select their emphasis area or develop an open emphasis, which requires preparation of an undergraduate plan of study.

Portfolio Requirement

Each student majoring in communication must present an acceptable portfolio of their work during the semester immediately prior to the beginning of their senior year (90 semester hours). This portfolio, which can include videotapes, audiotapes, published articles, scholarly papers, etc., will be reviewed by a three-person committee of communication faculty and professionals. This committee will evaluate (acceptable/acceptable) the portfolio and make recommendations for improvement and advancement during the senior year.

Transfer Credits

No more than 15 credits in communication will be accepted from other colleges or universities for students transferring to WSU and wishing to major in communication. The Elliott School of Communication is offering a unique program in communication, and students graduating with a major in communication from WSU must complete most of their major course work in residence.
Communication Core Courses

130Q. Communication and Society. (3). Division B course/elective. An introduction to the functions, processes and effects of individual and mass communication in American society. Explores economic, social and governmental impacts of such communication. Includes a survey of the media and communication industry.

301. Writing for the Mass Audience. (3). An introduction to the technique of writing for the mass audience, including emphasis on approach necessitated by technology in dealing with print broadcast, advertising, and public relations. Prerequisites: Engl. 101, Engl. 102, and Comm. 130Q, with a grade of C or better.

325. Speaking in Business and the Professions. (3). A study of the basic concepts of public speaking and discussions as they apply to the business and professional person. Emphasizes public presentations, group leadership and interpersonal communication as appropriate to business and professional occupations. Prerequisite: Comm. 111 with a grade of C or better.

430. Communication Research and Inquiry. (3). Introduction to the process of research and inquiry across the discipline of communication. Designed to help students in communication become more intelligent consumers of research and investigative inquiry, and to become more adept at designing their own research projects. Includes information gathering, structuring inquiry with qualitative and quantitative research designs, and processing and reporting information. Prerequisite: Junior standing and Comm. 130Q or instructor's consent.

535. Communication Analysis and Criticism. (3). An introduction to the methods used for the analysis and critique of various linguistic, pictorial and aural elements of communication for the purpose of becoming more discerning consumers of the various forms of public and mass-mediated messages. Analysis will include print advertisements, radio and television messages, newspaper features and public speeches. Prerequisite: Junior standing and Comm. 301 or instructor's consent.

620. Communication Law and Responsibility. (3). Emphasizes both oral and written aspects of communication law and responsibility. Addresses general functions of the law including the right to communicate, broadcast law and law of the press. Includes discussion of the first amendment rights, libel, privacy, copyright, advertising, obscenity, pornography and corporate ownership of the press. Prerequisites: Junior standing and Comm. 130Q or departmental consent.

631. Historical and Theoretical Issues in Communication. (3). Examines the development of various issues in communication in historical context. Emphasizes different humanistic and scientific theories of communication and the historical development of mediated communication. Uses selected theories to generate critiques of specific communication events. Prerequisite: Junior standing and Comm. 130Q or instructor's consent.

Lower-Division Courses

011. Reducing Fear of Speaking. (2). Designed for students who feel an unwarranted degree of fear, nervousness or stage fright when confronting situations calling for oral communication, especially but not exclusively, before groups of people. Goal is to reduce the fear of such situations through practice in supportive settings and other specific methods developed in the fields of counseling and speech communication that have been demonstrated effective in reducing communication anxiety. Prerequisite: Comm. 111 with a grade of C or better.

111. Public Speaking. (3). A study of basic concepts of speech communication as applied to public speaking. For students wishing to enhance leadership potential by improvement in traditional public speaking situations. (The University's requirement in oral communication must be fulfilled by completion of Comm. 111. For especially qualified students, an exemption or advanced standing examination is available. For further information, contact the Elliott School of Communication.)

112. Interpersonal Communication. (3). Develops awareness elements of interpersonal communication and aids the student in establishing more meaningful and satisfying interpersonal relationships through participation in group dynamics.

120. Debate Workshop. (2). Instruction in theory and techniques of debate and preparation for debating the national high school debate topic. Not repeatable for credit. Prerequisite: Departmental consent.

190Q. Crises in Communication. (3). Division B course/elective. An exploration of several alternative frameworks by which humans cope with and control the communication environment. The student uses observational and experiential opportunities to discover the variety of patterns used by humans to symbolically interact with themselves, each other and entire cultures. Utilizes multimedia instructional procedures.

202. Debate and Forensics. (2). Research and preparation for debate and individual speaking events, participation in intercollegiate debate and/or forensics competition and debate and forensics squad meetings. Repeatable for a maximum of four hours credit. May not be counted toward a major. Prerequisite: Departmental consent.


214. Audio Production. (3). Production and direction of audio programs. Hands-on use of all standard audio production equipment to learn techniques of sound blending and reproduction. Prerequisite: Comm. 204.

220Q. Introduction to Film Studies. (3). Division A course/elective. Emphasizes the nature and function of film as a mode of communication with attention to film theory and technical criticism. Selected films are shown in class.

221Q. Oral Interpretation. (3). Cross-listed as Thea. 221Q. Division A course/elective. The development of the oral interpretation, focusing on the dramatic techniques essential to the oral interpretation of literature.

222. Improving Voice and Diction. (3). Cross-listed as English. 222. For students wishing to improve their speaking voices and gain greater control over their pronunciation of spoken English. Course is performance oriented; however, the anatomy of the vocal mechanism and the International Phonetic Alphabet are studied for practical application in the improvement of voice and diction.


240. Introductory Photojournalism. (3). 2R; 3L. Lab fee. Basic photographic theory and technique emphasizing aspects of importance to journalists, writers and editors. Students take, develop and prepare pictures for publication. The department provides a limited number of cameras. Prerequisite: Comm. 301.

290. Listening Strategies. (3). Designed to help students in communication become more intelligent consumers of research and investigative inquiry, and to become more adept at designing their own research projects. Includes information gathering, structuring inquiry with qualitative and quantitative research designs, and processing and reporting information. Prerequisite: Junior standing and Comm. 130Q or instructor's consent.

Upper-Division Courses

301. Writing for the Mass Audience. (3). An introduction to the process of research and inquiry across the discipline of communication. Designed to help students in communication become more intelligent consumers of research and investigative inquiry, and to become more adept at designing their own research projects. Includes information gathering, structuring inquiry with qualitative and quantitative research designs, and processing and reporting information. Prerequisite: Junior standing and Comm. 130Q or instructor's consent.

311. Persuasive Speaking. (3). Training in influencing human behavior in socially acceptable ways via the spoken word. Prerequisite: Comm. 111.

312Q. Nonverbal Communication. (3). Division B course/elective. A session of theory and research in nonverbal communication. Students explore different aspects of nonverbal communication and engage in original research and study in the field of nonverbal communication. Emphasis is given to the application of nonverbal communication to the total human communication process. Prerequisite: Comm. 111.

313Q. Argumentation and Advocacy. (3). Divi-
420. Broadcast News. (3). Theory and techniques of preparing news for the electronic media, including preparation of news stories and news reports for radio and television. Prerequisite: Comm. 401 or instructor’s consent.

440. Advanced Photographic. (3). Lab fee. Advanced photographic theory and technique emphasizing the feature page photo essay, advertising photography and the use for daily news publications and the photojournalist’s personal viewpoints and philosophies. Using their own camera equipment and the department’s laboratory facilities, students shoot, process, and print photographs for publication. Prerequisite: Comm. 240,

481. Cooperative Education. (1-4). Credit for cooperative field placement that integrates theory with a planned and supervised professional experience designed to complement and enhance the student’s academic program. Individualized programs must be formulated in consultation with and approved by appropriate faculty advisors. May be repeated, but limited to a total of four credits. Prerequisite: Departmental consent. Graded Cr/NCr.

Courses for Graduate/Undergraduate Credit

500. Advanced Reporting I. (3). 1R; 4L. For juniors and seniors, the techniques of reporting and writing the more complex and important types of news stories. Covers police beat stories, sports and economic reporting and includes the study and practice of journalistic interviewing. Prerequisites: Comm. 501 and either 401 or 422.

502. Public Information Writing. (3). Uses basic journalistic skills of clear, concise writing to communicate effectively with various audiences. Students write press releases, speeches and popularizations of complex documents. Techniques learned in this course are valuable in writing grant proposals, committee reports, pamphlets and journal articles. Prerequisite: Comm. 501 with a grade of C or better, junior standing or departmental consent.

510. Editing for Print. (3). Selection, evaluation and preparation of copy and pictures for publication. Covers copy editing, rewriting, headline and caption writing and layout page. Prerequisite: junior standing and Comm. 401 with a grade of C or better.

522. Advanced Broadcast News. (3). 3R; 3L. Advanced techniques of preparing news for radio and television presentation emphasizing actual work in radio and television newsrooms. Lab periods arranged with instructor. Prerequisite: Comm. 422.

525. Advertising Copywriting. (3). Detailed practice at writing various kinds of advertising copy, employing all advertising copy forms. Emphasizes terse, precise writing that evokes response sought by advertiser. Prerequisite: Comm. 324 or departmental consent.

526. Media Buying and Selling. (9). Principles, methods, and strategies of buying and selling media for advertising, including such topics as study of reach and frequency of the various mass media and specialized media. Budgeting, research, rates, market share and other tools of current buying and selling strategies. Prerequisite: Comm. 324 or instructor’s consent.

530. Media Performance. (3). Provides experiences in various areas of electronic media performance, including newscasts, radio drama, interviews, sports and commercials. Extends through simulated experiences as well as on-air work, student performance skills, capabili ties and knowledge of audio and video media. Prerequisite: Comm. 111 and 221Q, 222 or Thea. 243.

550. Editorial Writing. (3). A study of editorial judgment, including practice in the writing of editorials and editorial page features and a study of research materials available to editorial writers. Prerequisites: Comm. 301 and junior standing.

570. Magazine Production. (3). Magazine production, including the choosing of subjects, approaches and illustrations; the shooting and editing of photographic stories; layout; the handling of production and management concerns. Prerequisite: Comm. 301 and 510 or departmental consent.

571. Magazine Writing. (3). Writing for magazines; emphasizes analyzing the market and patterning articles to fit the needs of specific magazines. Prerequisite: Comm. 301 and departmental consent.

581. Communication Practicum. (1-3). Application of theory, principles and practices to professional settings where students work under instructor supervision to continue their professional preparation in various areas of media and communication. Prerequisite: Comm. 301 and instructor’s consent.

604. Field Video Production. (3). Application of video equipment and techniques for field productions. Execution of visual and audio expression in relation to effective video productions in a field setting. Prerequisite: Comm. 304 or instructor’s consent.

607. Electronic Media Programming. (3). Planning, developing and scheduling based upon audience and market analysis, program ratings, principles of evaluation and criticism.

690. Interactive Media Production. (3). Investigation and application of production techniques for educational and instructional broadcasting, emphasizing television. Prerequisite: Comm. 304.

611. Media Management. (3). A study of the business and management operations of the mass media to give journalism students an understanding of the interrelationships in mass media enterprises. Prerequisite: junior standing or departmental consent.

622. Practicum in Broadcast Journalism. (3). Reporting and writing about events in the University and community. Story assignment and preparation under the instructor’s guidance; story broadcast over WSU Cable Channel 13. May be repeated for credit with advisor’s consent. Prerequisite: Comm. 522 or instructor’s consent.
625. Public Relations Campaigns. (3). Instruction and practice in planning and developing total public relations campaigns. Prerequisite: Comm. 350 and 502 or instructor's consent.

626. Advertising Campaign Research. (1). Introduction to primary and secondary research for advertising campaign development. Includes empirical approaches, market analysis, advertising evaluation, product and market testing, consumer analysis, questionnaire construction, and methods of sampling. Prerequisite: Comm. 342 or instructor's consent.

627. Advertising Campaign Production. (2). Work in this course builds on research conducted in Comm. 626 for planning and developing a complete advertising campaign. Students will design and develop a national campaign and an audio-visual presentation for the national and national collegiate competition sponsored by the American Advertising Federation. Prerequisite: Comm. 626 or instructor's consent.

632. American Public Address. (3). A detailed study of notable American speakers and their public utterances. Their impact on the political, economic and social history of this nation from colonial time to the present is assessed.

635. Leadership Techniques for Women. (3). Cross-listed as Wom. S. 635. Provides the woman student experience in decision making and improves skills in leadership through role playing and exercise in group dynamics.

650. Communication Training and Development. (3). An examination of communication concepts, processes, technologies and strategies related to training and development. Course includes the application of these elements to formal instruction across disciplines and at various educational levels as well as in most professional training settings.

660. Seminar in Communication. (1-3). Special seminars dealing with current problems, issues or interests in various areas of communication. Repeatable for credit in different topics only.

661. Directing the Forensics Program. (3). A study of the methods and procedures in coaching and directing the high school and collegiate forensic programs (debate and individual events). The future teacher is made aware of the literature and professional organizations in the field.

665. Communicative Disorders. (3). Cross-listed as CDS 705. A survey of speech, language and hearing disorders; their identification and treatment; and consideration of the roles of health and educational specialists in the total habilitative process. Provides background in normal communicative structures, processes and acquisition for understanding communicative disorders. Areas introduced include language disabilities in children, adult aphasia, articulation disorders, voice disorders, cleft palate, laryngectomy, stuttering, cerebral palsy and hearing impairment.

675. Directed Study. (2-4). Cross-listed as Thea. 675. Individual study or projects. Repeatable for credit with departmental consent. Prerequisite: departmental consent.

702. Contemporary Theories of Oral Communication. (3). An examination of theoretical perspectives of oral communication. Emphasizes historical, critical and observational methodologies in communication research. Prerequisite: Comm. 112 or instructor's consent.

715. International Communication Systems. (3). A comparative study of communication systems around the world, including print media, broadcasting, and new technologies. Examines the relationship between communication systems and the different social, cultural, and political contexts in which they exist, and the role of communication in international conflicts that have arisen from these differences. Prerequisite: senior standing.

720Q. Dimensions of Mass Communication. (3). Division B course/elective. A detailed study of mass media, their role as social institutions; their control, support, content and audience; and their effects.

722. The Art of Conversation. (3). Conversation is the form of communication people engage in most naturally and frequently, but about which they seldom think seriously. Course helps participants enhance their understanding and appreciation of, as well as their skill in, the art of conversation. Includes the nature of conversation, principles of conversational communication, types of conversation, conversation in the media and conversation analysis. Prerequisites: Comm. 112 and junior standing or departmental consent.

737. Processes and Effects of Mass Communication. (3). An exploration into the effects of mass communication at the individual social and cultural levels.

750. Workshops in Communication. (1-4).

770. The Audience. (3). Application of research techniques to the measurement of audience behavior emphasizing mass media audiences. Includes focus group interviews, survey research and radio and television ratings.

Courses for Graduate Students Only

801. Introduction to Communications Research. (3). An integrative approach to an understanding of the nature and scope of communication research as it applies to communication theory, mass communication, cross-cultural communication and theater/drama. Provides an overview of the current status of research in these areas. Instruction in the basic steps of research; availability of library and other resources; bibliographical search; computer accessing of source materials; organization, style and format of a research report and citation of sources in footnotes and bibliographies in accordance with standard style guides. Course should be taken at the beginning of the graduate program.

802. Historical and Qualitative Methodologies in Communication Research. (3). An introduction to historical, critical and observational methodologies in communication research. Emphasizes both experimental and nonexperimental research, particularly those forms of research common to communication studies. Prerequisite: Comm. 801.

803. Empirical/Quantitative Research Methodology in Communication. (3). An introduction to empirical research methods in communication. Emphasizes both experimental and nonexperimental research, particularly those forms of research common to communication studies. Prerequisite: Comm. 801.

820. Investigation and Conference. (2-3). Cross-listed as Thea. 820. Directed research and experimentation for graduate students in some phase of (a) speech communication, (b) electronic media or (c) speech education. Repeatable for credit up to a total of six hours.


831. Theories of Rhetoric Renaissance to Early Modern. (3). Cross-listed as Engl. 826. A study of the emerging patterns of rhetoric from the Second Sophistic to modern times. Analyzes the rhetorical systems associated with such figures as Augustine, Felenon, Bulwer, Sheridan, Steale, Rush, John Quincy Adams, Blair, Campbell and Whately.

860. Seminar in Communication. (1-3). Special seminars dealing with current problems, issues or interests in various areas of communication. Repeatable for credit in different topics only.

865. Organizational Communication. (3). Cross-listed as Mgmt. 865. An analysis of communication models emphasizing their application to communication problems in organizations. Explores social psychological processes underlying persuasion in interpersonal relations and through the mass media. Critically analyzes communication systems and techniques within formal organizations.

870. Directed Study. (1-3). Individual study or projects. Repeatable for credit with departmental consent. Prerequisite: departmental consent.

875-876. Thesis. (2-2).

Communicative Disorders and Sciences

For students desiring an emphasis in applied language study, see requirements and curriculum for a major in communicative disorders and sciences through
Fairmount College of Liberal Arts and Sciences listed in the College of Education section of the Catalog.

Computer Science

The Department of Computer Science offers a broad and flexible curriculum that emphasizes theoretical and practical aspects of computer science.

Students may earn either the Bachelor of Science (BS) or the Bachelor of Arts (BA) degree in computer science. Both degrees provide in-depth preparation for professional work in business, industry or government. The BS degree also provides a good preparation for graduate study in computer science or for scientific programming.

Major: Bachelor of Science (BS)

1. Computer Science: The following computer science courses are required: 210, 300, 312, 320, 410, 420, 440, 510, 540, 560 and 585.

In addition, students must complete 15 hours of advanced electives in computer science. These 15 hours of associated course work give students depth and breadth of knowledge, beyond what they receive in the required courses, by exposing them to advanced courses in some of the major areas in computer science. The advanced courses fall in six areas—artificial intelligence, software engineering, theoretical computer science, computer systems, computer hardware and scientific and numeric computation.

The student must complete 15 hours of course work in three or four areas.

All advanced electives must be approved by the departmental academic adviser.


3. Others: In addition, the following courses also are required: Phil. 354, Ethics and Computers; Engl. 210; and Soc. 301, Computers and Society.

In addition, students must complete 15 hours of sequence electives. These courses may be in software engineering, systems analysis, or some application area such as accounting or business administration. Other choices are also available. All sequence electives must be approved by the departmental academic advisor.

Minor: The minor in computer science currently is under revision. Contact the Computer Science Department for full information.

Example Schedule 
for BS in Computer Science

Freshman Year

- Engl. 101, College English I ........................................ 3
- Math. 242, Calculus I ........................................ 5
- Natural science Q/G (biology) ........................................ 4
- Comm. 111, Public Speaking ........................................ 3

Second Semester

- Engl. 102, College English II ........................................ 3
- CS 210, Introduction to Computer Science ......................... 4
- Math. 243, Calculus II ........................................ 5
- Elective .......................................................... 4

Sophomore Year

- CS 312, Assembly and Systems Programming ..................... 3
- CS 320, Foundations of Theoretical Computer Science .......... 3
- Math. 344, Calculus III, or 511, Linear Algebra ................. 3
- Humanities Q/G (literature) ........................................ 3
- Soc. 301, Computers and Society .................................. 3

Second Semester

- CS 300, Data Structures and Algorithms I ......................... 3
- Stat. 460, Elementary Probability and Mathematical Statistics .... 3
- Natural science Q/G ........................................ 3
- Hist. 131Q or 132Q or Pol. S. 121Q ................................ 3
- Elective .......................................................... 4

Junior Year

- CS 410, Programming Paradigms .................................... 3
- CS 440, Computer Organization and Architecture ................ 4
- CS 560, Data Structures and Algorithms II ....................... 3
- Natural science .................................................. 4
- Elective .......................................................... 4

Second Semester

- CS 420, Automata and Formal Languages ......................... 3
- CS 510, Programming Language Concepts .......................... 3

Senior Year

- CS 585, Software Design and Testing ................................ 3
- CS elective ...................................................... 3
- CS elective ...................................................... 3
- Humanities or social and behavioral science* .................... 3
- Natural science (non-biology) ...................................... 3
- Elective .......................................................... 1

*Choice depends on Am. Govt. selection.

Note: Students must complete Engl. 100 or 101 and Math. 112 with a C or better or have equivalent CLEP or transfer credit before taking any computer science course towards the BS degree. CS 105 for nonmajors and BA candidates is an exception to this requirement.

Example Schedule 
for BA in Computer Science

Freshman Year

- Engl. 101, College English I ........................................ 3
- CS 105, Introduction to Computers and Applications ......... 3
- Math. 111, College Algebra ...................................... 5
- Foreign Language .................................................. 5

Second Semester

- Engl. 102, College English II ........................................ 3
- CS 210, Introduction to Computer Science ......................... 3
- Stats 370, Elementary Statistics ................................... 4
- Foreign Language .................................................. 5

Sophomore Year

- CS 300, Data Structures and Algorithms I ......................... 3
- CS 320, Foundations of Theoretical Computer Science .......... 4
- Math. 144, Business Calculus ..................................... 3
- Foreign Language .................................................. 5
- Comm. 111, Public Speaking ........................................ 3

Second Semester

- CS 312, Assembly and Systems Programming ..................... 3
- CS 420, Automata and Formal Languages .......................... 3
- Social and Behavioral Science ...................................... 3
An Introduction to Programming and their application to problems. Prerequisites: CS 200Q, CS 210, or CS 191, and English 101 and Math. 109, 111, 112, or equivalent with a grade of C or better in each.

205. COBOL Language. (3). 2R; 2L. Fundamentals of computer programming in COBOL and their application to problems. Prerequisites: CS 191, 200Q, or 206, or 210, with a grade of C or better.

206. BASIC Language. (3). 2R; 2L. Fundamentals of computer programming in BASIC and their application to problems. No credit granted for this course or CS 410, or departmental consent. Prerequisites: CS 105, 191, 200Q, or 210, with a grade of C or better.

207. C Language. (3). 2R; 2L. Fundamentals of computer programming in C and their application to problems. Prerequisites: A grade of C or better in a high-level programming language course or CS 410, or departmental consent.

208. Modula-2 Programming. (3). 2R; 2L. Fundamentals of computer programming in Modula-2 and their application to problems. Prerequisites: CS 191, 200Q, or 210, and English 101 and Math. 109, 111, or 112 with a grade of C or better in each.

210. Introduction to Computer Science. (4). 3R; 2L. An introduction to basic computer concepts in hardware and software, evolution of computers, number systems and the process of analyzing problems and designing solutions in a structured high-level programming language. Prerequisites: English 101, Math. 111, 112 or equivalent with a grade of C or better in each.

211. Pascal Programming. (3). 2R; 2L. Fundamentals of computer programming in Pascal and their application to problems. Prerequisites: English 101 or English 101 and Math. 109, 111, 112 or equivalent with a grade of C or better in each.

213. PROLOG Programming. (3). 2R; 2L. Fundamentals of declarative programming in PROLOG and their application to problems. Prerequisites: Phil. 125Q or Math. 109 or Math. 111 or Math. 112 and English 101 with a grade of C or better in each.

214. LISP Programming. (3). 2R; 2L. Fundamentals of computer programming in LISP and their application to problems. Prerequisites: CS 191, 200Q, or 210 and English 101 and Math. 109, 111, 112 or equivalent with grades of C or better, or departmental consent.

215. Ada Language. (3). 2R; 2L. Fundamentals of computer programming in Ada and their application to problems. Prerequisite: CS 210 or 212 or equivalent with grade of C or better.

217. C++ Language. (3). 2R; 2L. Fundamentals of object-oriented programming in C++ with applications to problems. Prerequisite: CS 207 or departmental consent.

Upper-Division Courses

300. Data Structures and Algorithms I. (4). 3R; 2L. Basic data structures and associated algorithms. Includes stacks, queues, linked lists, trees and graphs. Prerequisite: CS 210 with a grade of C or better.

312. Assembly Language and Systems Programming. (3). 3R; 1L. Fundamentals of computer organization and architecture. Covers assembly language, memory systems, assembly language programming, computer instruction sets, and computer architecture. Prerequisites: Phil. 125Q and Math. 109 or 111 or 112 or equivalent with a grade of C or better.

320. Foundations of Theoretical Computer Science. (3). Propositional and predicate logic with applications to logic programming, PROLOG and their application to problems. Prerequisites: Phil. 125Q and Math. 109 or 111 or 112 or equivalent with a grade of C or better.

365. Introduction to Computer Graphics. (3). 2R; 2L. An introduction to interactive computer graphics which presents the basic concepts of the field. Includes geometry of computer graphics, windowing and clipping, hidden lines and surfaces and shading. Extensive use of computers provides practical experience. Prerequisite: CS 300.

410. Programming Paradigms. (3). 3R; 1L. Exposure to computer programming in various styles of languages. Emphasizes programming rather than theory. Prerequisites: CS 300 and 320 with a grade of C or better.

420. Automata and Formal Languages. (3). Finite automata, regular expressions, pushdown automata, context-free languages, Turing machines, and formal grammars. Prerequisites: CS 320 with a grade of C or better.

440. Computer Organization and Architecture. (4). 3R; 2L. A study of basic computer architecture and programming techniques required to control it. Includes number representation, arithmetical, communication between
major computer components, instruction processing cycle, addressing techniques and the concepts of microprograms. Programming problems demonstrate the concepts. Prerequisites: CS 300 and 312 with a grade of C or better in each.

481. Cooperative Education in Computer Science. (1-3). Provides a field placement that integrates theory with a planned and supervised professional experience designed to complement and enhance the student's academic program. Individualized programs must be formulated in consultation with and approved by appropriate faculty sponsors. Prerequisite: department consent. Offered by appropriate faculty sponsors. Prerequisite: department consent.

497. Special Topics. (1-3). Special topics of current interest in computer science. Prerequisite: departmental consent.

498. Individual Projects. (2-3). Repeatable for a total of six hours of credit. Graded S/U only. Prerequisite: departmental consent.

Courses for Graduate/Undergraduate Credit

501. Numerical Programming Techniques. (3). 2R; 2L. A study of the programming techniques used to solve nonlinear equations, interpolate, integrate and solve systems of linear equations. Discusses the implications of finite precision floating point arithmetic. Also covers techniques for initial and boundary value problems in ordinary differential equations. Selected algorithms are implemented on the computer. Prerequisites: Math. 243 and CS 300 with grades of C or better.

510. Programming Language Concepts. (3). Theoretical concepts in the design and use of programming languages, including scope of declarations, storage allocation, subroutines, modules, formal methods for the description of syntax and semantics. Introduction to the concepts of different styles of languages—imperative languages, functional languages, logic languages, object-oriented languages, etc. Prerequisite: CS 410 with a grade of C or better.

540. Operating Systems. (3). 3R; 1L. Covers the fundamental principles of operating systems: process synchronization, scheduling, resource allocation, deadlocks, memory management, file systems. Studies a specific operating system in depth. Programming assignments consist of modifications and enhancements to the operating system studied. Prerequisite: CS 440 with a grade of C or better.

560. Data Structures and Algorithms II. (3). 3R; 1L. Design and analysis of algorithms. Studies specific data structures, e.g., trees, graphs, etc. Emphasizes algorithm design techniques such as greedy, divide and conquer, dynamic programming. Analyzes time and space complexity of various algorithms. Prerequisites: CS 300, 320 and Math 344 or 511 and Stats. 460 with a grade of C or better in each.

585. Software Design and Testing. (2). 2R; 1L. Program design tools and techniques and program testing. Includes top-down and bottom-up design, various design paradigms, bottom-up and top-down testing techniques. Emphasizes large programming systems, illustrated by several programming projects. Prerequisite: CS 410 with a grade of C or better.

611. Ada and Software Engineering. (3). 2R; 2L. An in-depth study of the programming language Ada emphasizing understanding the software engineering principles on which its design is based. Focuses on the novel features the language has to offer such as packages, generics, separate compilation and multitasking structures. Laboratory sessions provide hands-on programming experience to reinforce textbook knowledge of the language. Prerequisite: CS 510.

612. Systems Programming. (3). 2R; 2L. A study of system software including assemblers, disassemblers, macroprocessors, link editors, loaders, language translators and debuggers. Practical experience in building system software through programming laboratory exercises. Prerequisite: CS 300 and 312 with a grade of C or better.

615. Compiler/Interpreter Techniques. (3). 2R; 2L. Review of programming language structures, translation and implementation. Compilation of simple expressions and statements. Overall design and organization of compilers and interpreters, including lexical and syntactic scan, construction of symbol tables, object code generation, diagnostic error messages and optimization techniques. Prerequisite: CS 510 or equivalent with a grade of C or better.

640. VLSI Systems Design. (3). 2R; 2L. Includes an introduction to VLSI system, MOS switch, integrated system fabrication, data and control flow in systematic structures, implementing integrated system design, overview of an LSI computer system, architecture and design of system controllers, and system timings and highly concurrent systems. Prerequisite: CS 440 with a grade of C or better.

641. Small Systems Architecture. (3). A course on minicomputers and microcomputers and on how small computers are used to construct larger ones. Includes general concepts of computer architecture particularly the differences between large computers and small computers and the special features of small computers, such as horizontal and vertical micro-programming; use of display terminals, cassettes, tapes and discs; networks of small computers, and trends in small computer use and design. Prerequisite: CS 440 with a grade of C or better.

655. Artificial Intelligence and Philosophy. (3). Cross-listed as Phil. 674. Transfer of ideas between artificial intelligence and philosophy: concepts and techniques of artificial intelligence and their application in philosophy (search, heuristic, process solving, knowledge representation, learning, discovering); sources of insight for artificial intelligence in different branches of philosophy. The analogy between minds and computers "cognition is a computation and the mind is a computer" is contrasted with "there are mental features not accessible to computation." Discusses the relevance of Godel's theorem and of other results in the domain of computability. Prerequisites: at least one 300-level course in computer science or philosophy, Math. 243; five hours toward the major in any of the physical or biological sciences; or departmental consent. A grade of C or better must be earned in each prerequisite.

680. Introduction to Software Engineering. (3). 2R; 2L. An introduction to the body of knowledge, presently available tools and current theories and conjectures regarding the process of program development. Studies these topics from several different viewpoints, ranging from the individual program statement to a large programming project. Prerequisite: CS 585 with a grade of C or better.

684. Applications Systems Analysis. (3). A study of the methods for analyzing business systems problems and other large-scale applications of the computer. At the crossroads of computer technology, management science and human relations, systems analysis is the keystone in the education of the well-trained computer applications analyst. Includes system design, cost benefit analysis, data base design, distributed processing, project management and documentation. Prerequisite: CS 300 with a grade of C or better.

697. Selected Topics. (1-3). Selected topics of current interest. Repeatable for credit with departmental consent. Prerequisite: departmental consent.

720. Theoretical Foundations of Computer Science. (9). Provides an advanced level introduction to the theoretical bases of computer science. Computer science theory includes the various models of finite state machines, both deterministic and nondeterministic, and concepts of decidability, computability and formal language theory. Prerequisite: CS 420 or equivalent with a grade of C or better or graduate standing.

742. Computer Communication Networks. (3). 2R; 2L. Introduction to computer communication networks, including network goals, data transmission, network topologies, connectivity analysis, delay analysis for networks of M/M/1 queues, network architectures, protocol hierarchies, design issues for the layers and the ISO reference model, and transport description of present computer communication networks. Prerequisite: CS 440 with a grade of C or better or departmental consent.

750. Workshop in Computer Science. (1-5). Short-term courses with special focus on introducing computer science concepts. Repeatable for credit. Prerequisite: departmental consent.

771. Artificial Intelligence. (3). Heuristic versus algorithmic methods, principles of heuristic approach and cognitive processes. Also covers objectives and methods of artificial intelligence research and simulation of cognitive behavior. Includes a survey of appropriate examples from various areas of artificial intelli-
773. Pattern Recognition. (3). An introduction to pattern recognition and image processing including clustering algorithms, cluster validity, feature extraction, classifier design, decision theory, parameter estimation, discriminant functions, syntactic pattern recognition, image enhancement, image registration, FFT, and application in various fields. Prerequisites: CS 212 and 300 and Math. 211 or 511, 243 and 331Q with grades of C or better. Stat. 370 recommended but not required.

776. Expert Systems. (3). Planning, construction, and application of expert systems. Discusses major aspects of expert systems; illustrates with various examples, including data representation, knowledge bases, inference engines, user interfaces, explanatory facilities, metaphors, and dealing with uncertainty. Introduces basics of a production system language. Prerequisite: CS 680 or instructor's consent.

798. Individual Projects. (1-3). Allows beginning graduate students and mature undergraduate students to pursue individual projects of current interest in computer science. Graded S/U only. Prerequisite: departmental consent.

Courses for Graduate Students Only

No computer science graduate students will be admitted to 800-level courses until they have completed CS 720.


821. Analysis of Algorithms. (3). Introduction to the techniques used to analyze both specific algorithms and classes of algorithms. Covers popular models, including Knuth's Mix and random access machine. Studies specific techniques such as divide-and-conquer, recurrence equations and dynamic programming. Analyzes applications to set operations, hashing, graph searching, transitive closure and partitioning. Prerequisites: CS 560 and either 420 or graduate standing.

841. Advanced Computer Architecture. (3). A study of advanced topics in computer architecture like parallel processing, stack architectures, computer performance evaluation and reliability of computing systems. Studies architectures of typical systems belonging to the IBM, CDC and Burroughs families of computers. Prerequisite CS 540.


843. Distributed Computing Systems. (3). A study of hardware and software features of on-line multiple computer systems emphasizing network design and telecommunications. Includes distributed data bases, interprocessor communication and centralization versus distribution. Also includes study of the use of microcomputers in representative configurations. Prerequisite: CS 540 or 641 or EE 694.

862. Principles of Data Base Design. (3). An advanced treatment of the principles of data base design. Addresses logical design, including relational model; physical design, including new technological advances in implementing very large data bases; security and integrity of data, and distributed data base networks. Prerequisite: CS 560.

872. Machine Learning and Discovery. (3). An advanced study of computer programs that learn, improve performance and make discoveries. Includes objectives, methods and research paradigms for such systems, a survey of existing methods and applications, including the most recent developments; theoretical principles for learning and discovery systems; computational theories of learning processes and cognitive models of human learning; concept and theory formation, and use of analogy in learning. Includes participation in a group project such as developing a computer learning system. Prerequisites: CS 771 or 776 or 214 and 574, or CS 214 and 773.

873. Computer Vision. (3). An introduction to computer vision, a rapidly growing subfield of artificial intelligence. The basic topic is the understanding or description of images by a computer or robot. Covers two-dimensional Fourier analysis, scene matching and understanding, texture, motion, shape recognition, relational image structure and human perception. Prerequisite: CS 773 or instructor's consent.

874. Simulation and Modeling. (3). An up-to-date treatment of the important aspects of a simulation study, including data generation and testing, construction and verification of simulation models, simulation with high-level programming languages and simulation with GPSS. Prerequisites: CS 300 or AE 327. Math. 344 and Stat. 571 or IE 354.

881. Software Specification and Design. (3). A detailed presentation of the techniques and tools available for the specification of software requirements and their translation into a design. Includes formal specification and design methods such as structured analysis, object-oriented design and JSD. Prerequisite: CS 680.


886. Software Project Management. (3). Presents the knowledge, techniques and tools necessary to manage the development of software products. Topics center on ensuring quality in the product, productivity in the team and reducing risk in the project life cycle. Course may not be repeated by students who have taken it under previous numbers. Prerequisite: CS 680.

889. Topics in Software Engineering. (3). An in-depth study of one or more topics in software engineering, such as Configuration Management, Qualitative Assurance, Formal Specification, or Real-time Software Development. Actual topics vary with instructor's area of expertise. May be repeated for credit with different topics, but topics taken under previous course numbers may not be repeated. Prerequisite: CS 680.

890. Graduate Seminar. (2). A series of seminars on topics of current research interest in computer science. Participants are required to present one or two seminars on topic(s) to be selected with the approval of their graduate advisor. Repeatable up to four credit hours. Graded S/U only. Prerequisite: departmental consent.

891. Practicum. (3). An intensive applied learning experience, involving the analysis and solution of a significant practical problem and appropriate documentation of the work done. Students are required to participate in a departmental seminar where their practicum experiences are shared with other students and faculty. Graded S/U only. Prerequisite: departmental consent.

892. Thesis. (1-6). May be repeated for up to six hours of credit. Graded S/U only. Prerequisite: departmental consent.

893. Individual Reading. (1-5). Graded S/U only. Prerequisite: departmental consent.

898. Special Topics. (2-3). Topics of current interest to advanced students of computer science. Repeatable for credit with departmental consent. Prerequisite: departmental consent.

Economics

Major. The economics major in Fairmount College of Liberal Arts and Sciences requires a minimum of 31 hours and a maximum of 41 hours in economics. Math. 144 or Math. 242Q is
required. Students who plan to major in economics should consult with the undergraduate adviser in the Department of Economics in Clinton Hall. The following courses are required:

**Course** | **Hrs**
--- | ---
Math. 144, Business Calculus or Math. 242Q, Calculus I | 3
Econ. 201Q and 202Q, Principles of Economics I and II | 6
Econ. 231, Introductory Business Statistics | 4
Econ. 301, Intermediate Macroeconomics | 3
Econ. 302, Intermediate Microeconomics | 3
Econ. 340, Money and Banking | 3
Upper-division electives | 12
Econ. 201Q and 202Q may be taken as part of the Fairmount College requirements.

**Minor.** A minor in economics is available to any student whose major field or area of emphasis is outside of economics. A minor consists of 15 hours exclusive of Econ. 101G, 102Q and 231. Econ. 201Q and 202Q, or the equivalents, must be included.

**Teaching of Economics.** Because Kansas Department of Education regulations governing the certification of secondary economics teachers are very specific and contain requirements beyond the economics major, students planning to be teachers of economics should contact a secondary social studies adviser in the College of Education for program planning.

**Courses.** Economics courses are listed in the Barton School of Business section of the Catalog.

### English Language and Literature

**English Language and Literature**

The English department offers a broad and flexible program of courses that are central to a liberal education while offering students the opportunity for personal enrichment and a variety of career possibilities. The department offers degree programs in creative writing, literature and English teaching, as well as a range of courses in linguistics. Students who combine an English major with substantial work in other disciplines will find the knowledge and communications skills acquired in their work in English a valuable asset as they seek entrance into a wide range of fields that include communications, education, government, law and even business.

**Major.** A major consists of 33 hours, three of which may, with departmental consent, be taken in a cognate subject (such as foreign literature, theatre, etc.) offered in a course by another department. The course work must be distributed as follows:

I. **Basic Requirements (21 hours)**
   - Engl. 272Q*, 310*, 320Q* or 330Q*, 360, 361, 362Q; 274 or 315
II. **Major Requirements (12 hours with at least 6 upper-division hours)**

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**Prerequisites for all other English courses unless special permission is granted.**

**Minor.** A minor consists of 15 hours and requires Engl. 310, 320Q or 330Q and at least six hours of upper-division work. Engl. 101 and 102 are not counted toward a minor. A number of minors have been specially designed to support majors in other fields; for further information, contact the chairperson of the English department.

### Creative Writing

A student planning to major in creative writing must complete Engl. 101 and 102 and thereafter complete 33 hours of course work in English, including the following courses:

I. **Basic Requirements (12 hours)**
   - Engl. 272Q*, 310*, 320Q* or 330Q*, 274 or 315
II. **Major Requirements (3 hours)**
   - Engl. 285Q (to be completed with a grade of B or better or receive departmental consent for further creative writing course work)

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**Prerequisites for all other English courses unless special permission is granted.**

### Teaching

Students must file a declaration of English teaching major with an assigned English-education adviser at the time they apply to the teacher education program. A 2.500 grade point average in English is required of all majors applying for admission to the professional semester of student teaching in secondary school English.

**Major for Students Planning to Teach English in Secondary Schools.** The teaching major in either Fairmount College or the College of Education is 51 hours distributed as follows:

I. **Language (6 hours)**
   - English 315 and 665, 667 or 274
II. **Composition (6 hours)**
   - English 680 and 210, 685Q or any course in the creative writing sequence
III. **Literature (27 hours)**
   - A. Foundations: English 272Q*, 310*, 320Q* or 330Q* and 340Q
   - B. British and American literature: Engl. 362Q or 503, 252Q or 504, 360 or 361
   - C. Cross-cultural language/literature: Engl. 342, 345, 365 or 672
IV. **Other (6 hours)**
   - A. Theatre 143G and 221Q
V. **Electives (6 hours)**
   - Six hours in English, in certifiable minor

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**Prerequisites for all other English courses unless special permission is granted.**

### Composition

**Noncredit Courses**

010. **Syntax, Logic and Organization.** (3). Offered Cr/NCr only. Reviews the basic elements of written English. Combines lecture, small-group discussion and individual tutoring. For students whose ACT-English scores are 16 or below or when placement test scores do not qualify them for Engl. 101. Credit not applied for graduation.

013. **Basic Skills for ESL I.** (3). Offered Cr/NCr only. Teaches the fundamental elements of written and spoken English, emphasizing the acquisition of basic grammatical and syntactical structures and the writing of paragraphs.

015. **Basic Skills for ESL II.** (3). Offered Cr/NCr only. Extends the skills developed in...
Courses for Graduate/Undergraduate Credit

680. Theory and Practice in Composition. (3). Introduction to theories of rhetoric, research in composition and writing programs and practices in schools and colleges. Students investigate the process of writing, analyze various samples of school writing and develop their own writing skills by writing, revising and evaluating their own and others' work. Especially for prospective and practicing teachers; may not be taken for credit by students with credit in Engl. 780.

685Q. Advanced Composition. (3). Division A course/elective. Explores the relationships among contemporary issues, problem-solving and communication. The first objective is to engage students in interdisciplinary inquiry into some aspect of social policy, inquiry which asks students to apply the analytical approaches of their major fields to current issues of broad, general interest. The second objective is to develop students' abilities to communicate their knowledge and assumptions about this issue to a variety of audiences and for a variety of purposes. Prerequisites: Engl. 101 and 102 and upper-division standing.

780. Advanced Theory and Practice in Composition. (3). For teaching assistants in English. Review of new theories of rhetoric, recent research in composition and new promising developments in composition programs in schools and colleges. Students are given practice in advanced writing problems, situations and techniques and may propose projects for further special study.

Creative Writing

Lower-Division Course

285Q. Introduction to Creative Writing. (3). Division A course/elective. An introductory course, the techniques and practice of imaginative writing in its varied forms. Course may be used to fulfill the general education requirement only as an elective (studio and performance). Prerequisites: Engl. 101 and 102.

285R. Introduction to Creative Writing. (3). Division A course/elective. An introductory course, the techniques and practice of imaginative writing in its varied forms. Course may be used to fulfill the general education requirement only as an elective (studio and performance). Prerequisites: Engl. 101 and 102.

301. Creative Writing: Prose Fiction. (3). Repeatable for credit. Prerequisite: Engl. 285Q with a grade of B or better.

303. Creative Writing: Poetry. (3). Repeatable for credit. Prerequisite: Engl. 285Q with a grade of B or better.

401. Advanced Creative Writing: Prose Fiction. (3). An advanced course; develops the skilled practice of writing, rewriting, revising and polishing prose fiction. Prerequisites: English 285Q and at least three hours of English 301.

403. Advanced Creative Writing: Poetry. (3). An advanced course; develops the skilled practice of writing, revising and polishing poetry. Prerequisites: English 285Q and at least three hours of English 303.

Courses for Graduate/Undergraduate Credit

517-518. Playwriting I and II. (3; 3). Cross-listed as Thea. 516 and 517. Not repeatable for credit.


604. Writing Seminar: Fiction. (3). Advanced course primarily for the nontraditional student, both graduate and undergraduate, who desires intensive experience in the conceptualization and writing of prose fiction. Not creditable toward the MFA degree. Prerequisites: six hours of undergraduate creative writing or instructor's consent based on submitted manuscript. Departmental consent required for undergraduate enrollment.

605. Writing Seminar: Poetry. (3). Advanced course primarily for the nontraditional student, both graduate and undergraduate, who desires intensive experience in the conceptualization and writing of poetry. Not creditable toward the MFA degree. Prerequisites: six hours of undergraduate creative writing or instructor's consent based on submitted manuscript. Departmental consent required for undergraduate enrollment.

Courses for Graduate Students Only

801. Creative Writing: Fiction. (3). Advanced work in creative writing. Repeatable for credit. Prerequisite: consent of creative writing director.

805. Creative Writing: Poetry. (3). Advanced work in the writing of poetry. Repeatable for credit. Prerequisite: consent of creative writing director.

875. Master of Fine Arts Essay. (1-6).

880. Writer's Tutorial: Fiction. (3). SJU grade only. Tutorial work in creative writing in prose fiction with visiting writer. Prerequisite: consent of creative writing director.

881. Writer's Tutorial: Poetry. (3). SJU grade only. Tutorial work in creative writing in poetry with visiting writer. Prerequisite: consent of creative writing director.

Linguistics

Upper-Division Course

315. Introduction to English Linguistics. (3). Cross-listed as Ling. 315. Introduction to linguistic principles, including phonological and grammatical concepts.

Courses for Graduate/Undergraduate Credit


667. English Syntax. (3). Cross-listed as Ling. 667 and Anthr. 667. A study of the basic principles of English syntax, including many of the major factors of English sentence construction and relating them to linguistic theory. Prerequisite: Engl. 315 or equivalent or departmental consent.

672. Studies in Language Variety. (3). Cross-listed as Ling. 672. An introduction to the study of language variety with special attention to regional and social dialect in America and methods of studying it. May be repeated for credit when content varies. Prerequisite: Engl. 315 or departmental consent.

727. Teaching English as a Second Language. (2-3). Cross-listed as Ling. 727 and CDS 727. Discusses current methods of teaching English to non-native speakers. Students learn to analyze interlanguage patterns and to design appropriate teaching units for class and language laboratory use.
740. Graduate Studies in Linguistics. (3). Cross-listed as Ling. 740. Selected topics in the theories of language and methods of linguistic study. With departmental consent, the course is repeatable for credit.

Literature

Lower-Division Courses

220G. The Literary Heritage: English Masterpieces. (3). Division A course/elective. Introduces to the lower-division general student selections from the English masterpieces that constitute the literary heritage.

223. Books and Ideas. (3). Reading, discussing and some writing about literature from all periods and cultures (fiction, poetry, drama and essays). For non-English majors; not credited toward an English major or minor.

230G. Exploring Literature. (3). Division A course/elective. Perceptive reading of literature in its major traditional periods and in its various genres (especially fiction, drama and poetry). Deepens the appreciation and understanding of literature: what it is, what it does and how it does it. Readings are selected with careful attention to the needs and interests of non-English majors and a cultural rather than a technical approach is employed.

232G. Themes in American Literature. (3). Division A course/elective. Instruction in perceptive reading through the study of representative works in American fiction, poetry, drama and the essay. Emphasizes understanding and appreciation of central themes and dominant ideas. Multimedia presentations (films, readings and recordings), which are closely correlated to the representative works being studied, amplify the scope and range of literature per se.

235Q. Modern American Writers. (3). Division A course/elective. A survey of important works by major American writers since World War I.

236Q. Modern British Literature. (3). Division A course/elective. A survey of important works by major writers of the British Isles, including Ireland, in the 20th century.

272Q. Origins of the Western Literary Tradition. (3). Division A course/elective. A study of the literary forms that first appear in classical and Biblical literature and reappear in the English literary tradition. Readings from mythology, the classics and elected books of the Bible.

274. The Language of Literature. (3). An examination of the principles and problems of literary interpretation that are especially related to language structure.

275Q. Studies in Popular Literature. (3). Cross-listed as Am. St. 275Q. Studies various forms of popular literature (e.g., revolutionary literature, science fiction, western fiction, detective novel) emphasizing both the literary merit of the work and the way it reflects popular tastes and values. Repeatable for credit with change of content.

290Q. The Bible as Literature. (3). Division A course/elective. Studies the Bible as a literary artifact through extensive readings in both Old and New Testaments. Points out literary techniques and discusses their meaning for the manner of composition of the Bible.

Upper-Division Courses

307C. Narrative in Literature and Film. (3). Cross-listed as Am. St. 275Q. Studies various literary forms of popular literature (e.g., revolutionary literature, science fiction, western fiction, detective novel) emphasizing both the literary merit of the work and the way it reflects popular tastes and values. Repeatable for credit with change of content.

310. The Nature of Poetry. (3). Acquaints the student with the variety of poetic forms and techniques. Notes contributions of culture, history and poetic theory as background to the works under study, but primarily emphasizes the characteristics of poetry as a literary communication.

320Q. The Nature of Drama. (3). Division A course/elective. Acquaints the student with drama as a form of literary expression. While introducing a variety of plays drawn from different cultures and historical periods, course focuses on the characteristics of drama, giving some attention to dramatic history and theory.

330Q. The Nature of Fiction. (3). Division A course/elective. Acquaints the student with narrative fiction in a variety of forms: the short story, short novel and novel. Covers works of fiction drawn from different cultures and historical periods; focuses on the characteristics of fiction, giving some attention to historical development and to theories of fiction.

340Q. Major Plays of Shakespeare. (3). Division A course/elective. For students who wish to study the best work of Shakespeare's career in one semester. Students who take this course may take Eng. 510 once for credit.

342. American Folklore. (3). Cross-listed as Am. St. 342. Survey of the types and functions of unwritten traditional materials in the United States, including beliefs, tales, jokes, folk music, customs and crafts, including some ethnic varieties: the unwritten materials that form the uniqueness of American culture.

345. Studies in Comparative Literature. (3). Study of representative works in the Western and ancient Near Eastern literary traditions emphasizing the comparative relations between themes, types and structures. Readings may be drawn from one or several periods and may include works of fiction, drama, poetry, epic, romance, satire and other types.

360. Major British Writers I. (3). Covers the primary writers in British literature from the beginnings through the eighteenth century.

361. Major British Writers II. (3). Covers the primary writers in British literature from the nineteenth century to the present.

362Q. African Writers of the 19th Century. (3). The study of the major works in the different genres by important African writers of the 19th century as they relate to the growth of a rational literature.

365. Afro-American Literature. (3). A survey course; acquaints the student with the most significant Afro-American writers from the 1700s to the present. Covers early slave narratives and early slave poetry to the Harlem Renaissance; student reading, discussion and writing begin with the Harlem Renaissance and end with the 1970s. Prerequisites: Eng. 101 and 102.

400G. The Literary Imagination: Epic, Romance, Tragedy, Comedy. (3). Division A course/elective. Acquaints the general student with the major modes that have shaped the Western literary tradition. Focuses on the tendency of the imagination to construct different kinds of fictions that satisfy the human demand for various forms of literary pleasure—the pleasure that derives from the experience of love and war, a heroic scale (epic and romance), of pain and suffering (tragedy) and of human folly (tragedy and satire). Also acquaints students with the nature of literary inquiry by approaching works from a variety of critical perspectives.

450. Independent Reading. (1-3). For majors and nonmajors who wish to pursue special reading or research projects in areas not normally covered in course work. Repeatable for credit.

Courses for Graduate/Undergraduate Credit

503. Studies in American Literature I. (3). The major fiction, poetry and nonfiction prose of the classic American period. Discussions may include the historical evolution of American letters, the development of the novel and romance, the transcendental period and the rise of western and regional literatures.

504. Studies in American Literature II. (3). Fiction, poetry and drama from the late 19th century to after World War II. Readings also may include literary criticism and other types of nonfiction prose. Discussions cover themes, topics and literary forms inspired by the social and cultural movements and events of the first half of the 20th century.

512. Studies in Fiction. (3). Subjects announced each semester. Repeatable for credit.


514. Studies in Drama. (3). Subjects announced each semester. Repeatable for credit.

515. Studies in Shakespeare. (3). Subjects announced each semester. Repeatable for credit, except by students who take Eng. 340Q. Prerequisites: junior standing and one college literature course or instructor's consent.

521. Readings in Medieval Literature. (3). English and Continental literature, 12th to 15th century. Chaucer, Malory, the Pearl Poet, medieval lyric, drama, epic, romance and saga. Prerequisites: junior standing and one college literature course or instructor's consent.

522. Readings in Renaissance Literature. (3). Sidney, Spenser, Shakespeare (poetry). Donne,
324. Readings in Restoration and 18th Century Literature. (3). Swift, Pope, Johnson and their contemporaries. Prerequisites: junior standing and one college literature course, or instructor's consent.

526. Readings in Romantic Literature. (3). Blake, Wordsworth, Coleridge, Byron, Shelley, Keats and their contemporaries. Prerequisites: junior standing and one college literature course, or instructor's consent.

527. Readings in Victorian Literature. (3). Writers from Carlyle to Yeats studied in relation to political events and the social, scientific and religious thought of the age. Prerequisites: junior standing and one college literature course, or instructor's consent.


533. Studies in Contemporary Literature. (3). Modern literature, primarily British and American, since 1950. Subjects announced each semester. Repeatable for credit.

535. Literary Images of Women: Diverse Voices. (3). Cross-listed as Wom. S. 535Q. Explores various themes in critical approaches to literature composed by women writers, especially those whose works have been underrepresented in the literary canon. Genres and time periods covered, critical theories explored and specific authors studied vary in different semesters.

536. Writing by Women. (3). Cross-listed as Wom. S. 536Q. Explores various themes in women's literary works and as expressions of women's differences from one another. Works selected on their specific attention to the question of gender as it intersects with other elements of culture.

537. Contemporary Women's Drama. (3). Cross-listed as Wom. S. 537. Examines contemporary plays by and about women to discover and explore the insights that the works portray into the lives and roles of women. In addition to reading and analyzing plays, students write plays of their own.

580. Special Studies. (1-3). Topic selected and announced by the individual instructor. Repeatable for credit. Prerequisite: departmental consent.

610. Old English. (3). Cross-listed as Ling. 610. Repeatable for credit.

Courses for Graduate Students Only

800. Introduction to Graduate Study in English. (3). Prepares students to perform effectively in graduate classes in English. Concerned with: (1) basic bibliographical tools; (2) terminology both technical and historical; (3) various approaches to the study of literature, such as intrinsic analysis of a literary work, the relationships of biography to literary study and the relevance of other disciplines, such as psychology to literature; and (4) the writing of interpretative and research essays. Throughout the semester a balance between criticism and research is maintained.

817. Graduate Readings in 20th Century British Literature. (3). Yeats, Joyce, Lawrence, Auden, Spender and their contemporaries.

821. Graduate Readings in American Literature I. (3). From the beginnings to 1870 emphasizing Emerson, Thoreau, Hawthorne, Melville, Whitman and Dickinson.

822. Graduate Readings in American Literature II. (3). From 1870 to 1920 emphasizing James, Twain, Crane, Dreiser, Robinson and Frost.


826. Theories of Rhetoric: Renaissance to Early Modern. (3). Cross-listed as Comm. 831. A study of the emerging patterns of rhetoric from the Second Sophistic to modern times. Analyzes the rhetorical systems associated with such figures as Augustine, Seneca, Bulwer, Sheridan, Steele, Rush, John Quincy Adams, Blair, Campbell and Shadwell.

830. Graduate Studies in Drama. (3). Selected topics in the history and nature of dramatic literature.

832. Graduate Studies in Fiction. (3). Selected topics in the development of the form and content of prose fiction.

834. Graduate Studies in Poetry. (3). Selected topics in forms, techniques and history of poetry.


841. Graduate Studies in Contemporary Literature. (3). Covers selected topics in the literature of the last quarter-century, including literature in translation. Deals with a broad range of authors and genres, but with change of content and departmental consent, it will be repeatable for credit.

845. Graduate Studies in a Major Author. (3). Careful study of the works of a major author with readings in secondary sources, reports, discussions and papers. Repeatable for credit with change of content.

855. Directed Reading. (2-3). For graduate students who want to pursue special research in areas not normally covered in course work. Repeatable for credit with departmental consent. Prerequisite: departmental consent.

860. Graduate Seminar in Special Topics. (3). Intensive study of selected texts, writers or literary problems. Seminar discussions, reports and research projects. Repeatable for credit with departmental consent.


875. MFA Essay. (6).

Film Studies

The film studies minor at The Wichita State University is designed to provide students interested in film and the visual media with a focused sense of the possibilities, limitations and actual accomplishments of the visual media as they have, in fact, developed. The minor also offers opportunities to study film as an artform and to gain experience in media production. The film studies minor consists of 18 semester hours from the courses listed below, selected with the approval of the coordinator of film studies.

The Wichita State University does not at this time offer a film studies major. However, the minor will prove useful to students majoring in literature, journalism and speech, and will also appeal to those in fields where some knowledge of mass communication as a cultural phenomenon is desirable, including sociology, history, anthropology, psychology, education, administration and American studies.

Students seeking more information about the film studies minor should contact Dr. James Erickson in the Department of English.

Courses approved for the film studies minor are Hist. 106Q, The Way It Was: Western Civilization in Film; Comm. 220Q, Introduction to Film Studies; Art G. 231, Basic Photography (Motion Picture); English 307G, Narrative in Literature and Film; Comm. 320, Cinematography; Art G. 430, Television for Graphic Design; Comm. 304, Television Production and Direction; and Comm. 604, Advanced Television Production and Direction.

French

See Modern and Classical Languages and Literatures.

Geology

The Bachelor of Science (BS) degree in geology provides in-depth training for professional work in industry or govern-
ment as well as for graduate study. The Bachelor of Arts (BA) degree in geology provides training for graduate study or teacher preparation background. A number of assistantships, fellowships and scholarships are available. Contact the Department of Geology for further information.

The geology program emphasizes field and laboratory skills in sedimentology/stratigraphy and related fields. Particular attention is directed to solving problems of mineral exploration, mineral-resource evaluation and depletion and the environment.

Students who expect to achieve either the BS or BA in geology within a minimum period of time should have completed geometry, trigonometry and two years of algebra in high school. Chemistry and physics also are recommended in high school.

**Geology Major.** A major with the BA requires a minimum of 33 hours in geology, including the following:

1. Geol. 111Q, General Geology
2. Geol. 312, Historical Geology; 320, Mineralogy; and 324, Petrology
3. Geol. 540, Field Mapping; 544, Structural Geology; 552, Physical Stratigraphy; and 570, Biogeology
4. Nine additional hours of upper-division geology electives or other sciences with prior written approval of the department.

Required supporting sciences for the BA are:

1. Any approved course in biological sciences
2. Any one of the following groups
   a. Chem. 111Q or 123Q, and Phys. 213Q and 214Q (or 313Q, 315Q and 314Q, 316Q)
   b. Chem. 111Q and 112Q (or 123Q and 124Q) and Phys. 213Q or 313Q, 315Q
4. CS 200Q and 201 (or an approved substitute).

A major with the BS requires a minimum of 43 hours in geology, including the following:

1. Geol. 111Q, General Geology
2. Geol. 312, Historical Geology; 320, Mineralogy; and 324, Petrology
3. Geol. 526, Sedimentary Geology; 540, Field Mapping; 544, Structural Geology; 552, Physical Stratigraphy; 560, Geomorphology; 570, Biogeology; and 581, Numerical Geology
4. Geol. 640, Field Geology
5. An applied geology course that includes either Geol. 720, Geochemistry; 650, Geohydrology; 660, Geophysics; 686, Economic Geology; or 682, Petroleum Geology
6. One additional course from 500-level courses and above.

Required supporting sciences for the BS degree are:

1. All those courses listed for the BA degree
2. Chem. 112Q (or 124Q), or Physics 214Q (or 314Q, 316Q), to complete a one-year sequence each in chemistry and physics

BA candidates must meet the language requirements of Fairmount College of Liberal Arts and Sciences. BS candidates must elect one of the following options:

(a) ten hours of modern language, (b) an additional nine hours of computer science/mathematics or (c) an additional nine hours of statistics/computer science.

Students electing options (b) or (c) must get prior written approval from the department chairperson for an approved program of courses. Election of one of the two options for language requirements will not alter existing departmental mathematics requirements.

**Minor.** A minor in geology consists of at least 15 hours of geology including Geol. 111Q, General Geology.

It is suggested that students minoring in geology consult with the department in selecting courses most appropriate to their major field of study.

**Nonmajor and Nonminor Students.** A non-major or nonminor student who wishes to achieve the broadest terminal background in geology is advised to take Geol. 111 Q, General Geology, and 312, Historical Geology. Similar advice is offered to the potential major whose decision to elect geology is pending.

**Lower-Division Courses**

101Q. Science and Environment. (3). Division C course/elective. Study of the physical environment and environmental education—the educational process concerned with man's relationship with his natural and manmade surroundings; includes the relation of pollution, pollution, energy, resource depletion and allocation, conservation, transportation, technology, economic impact and urban and rural planning to the total human environment.

111Q. General Geology. (4). 3R; 2L. Division C course/elective. An overview of the earth, the concepts of its origin, composition, materials, structure, landforms and history; and natural processes operating to create man's physical environment. May require field trips into the earth laboratory.

150. Workshop. (1-4). Short-term courses focusing on geological problems. Prerequisite: instructor's consent.

**Upper-Division Courses**

300G. Energy, Resources and Environment. (3). Division C course/elective. An examination of man's effects on his environment and man's dependence on earth resources in meeting his needs. Examines the significance of availability and location of energy and mineral resources relative to the protection and improvement of man's environment and man's desires for a high standard of living. Some emphasis on urban geology.

302Q. Earth and Space Sciences. (3). 2R; 2L. Division C course/elective. A general survey of man's physical environment, including elements of geology, geography, meteorology, climatology, oceanography and astronomy. May require field trips. Not open to students who have taken Geol. 111Q or Geog. 201.

310. Oceanography. (3). Geologic origin of ocean basins and sea water; dynamics of waves, tides and currents; physical and chemical properties of sea water; diversity of life in the ocean; economic potential, law of the sea and man's effect on the marine environment.

312. Historical Geology. (3). 2R; 3L. A systematic review of earth history and its preservation in the rock record using field evidence for sequences of biological and tectonic events in selected areas. Also includes the origin and evolution of life. May require field trips. Prerequisite: Geol. 111Q or 302Q or equivalent.

320. Mineralogy. (3). 1R; 6L. Elementary crystallography. A study of the origin, composition and structure of the rock-forming minerals with laboratory emphasis on recognition of their typical forms, occurrences, associations and identification. May require field trips. Prerequisite: Geol. 111Q.

324. Petrology. (3). 1R; 6L. The origin, distribution, occurrence, description and classifications of igneous, metamorphic and sedimentary rocks with laboratory emphasis on the identification of rocks. May require field trips. Prerequisite: Geol. 320.

410. Honors in Geology. (3). Senior thesis for departmental honors. The independent study project on a topic of the student's choice must be original research or creative work. Repeatable to a maximum of six credit hours. Prerequisite: acceptance by the Emory Lindquist Honors Program and departmental approval.

430. Field Studies in Geology. (2-6). Off-campus, systematic field study in a selected area of geologic significance. Course is given upon demand and may be repeated for credit when locality and content differ. Where appropriate, travel, lodging and board costs are charged.
Courses for Graduate/Undergraduate Credit

501. Raw Materials of Antiquity. (3). 2R; 2L. Nature of rocks, minerals and metallic ores used in prehistory and ancient times. Also weathering, sedimentation and soil-forming processes; elements of stratigraphy; geologic history of the Pleistocene and Recent Epochs; relative and absolute age dating; mineralogy of clays and ceramics; and mining and metallurgical processes of antiquity. Prerequisite: Anthr. 501 or equivalent or instructor's consent.

520. Optical Mineralogy. (3). 1R; 6L. Optical properties of amorphous and crystalline materials in polarized light. Introduces use of the petrographic microscope in the quantitative determination of rock-forming minerals and mineraloids in thin section and immersion oil methods. Prerequisite: Geol. 320.

526. Sedimentary Geology. (3). 2R; 3L. Origin, classification, primary structures and physico-chemical processes controlling deposition of sedimentary rocks, especially carbonates. Includes an analysis of modern and ancient sedimentary depositional environments and a systematic petrographic study of sedimentary rocks in thin section, insoluble residues and heavy-mineral analysis. May require field trips. Prerequisite: Geol. 324.

540. Field Mapping Methods. (3). 9L. Field mapping methods with special reference to use of level, compass, barometer, alidade and aerial photos. Field trips required. Prerequisite: Geol. 201 or Geol. 111Q.

541. Plate Tectonics. (3). The mathematical treatment of plate tectonics including aspects of spherical geometry necessary to understand the movement of plates over the earth's surface. Includes earthquake focal mechanisms and paleomagnetic interpretations of plate movements; driving forces for plate tectonics; the history of the development of plate tectonic theory. Prerequisites: Geol. 111Q and Math. 112 or 123 or equivalent mathematical background.

544. Structural Geology. (3). 2R; 3L. Stress-strain theory and mechanics of rock deformation, description and genesis of secondary structural features in crustal rocks resulting from diastrophism elements of global tectonics and laboratory solution of geologic problems in three dimensions and time. May require field trips and field problems. Prerequisites: Math. 112 or 123 and Geol. 552 (or taken concurrently).

552. Physical Stratigraphy. (3). 2R; 3L. Description, classification, correlation and relative ages of stratigraphic rock units and the origin of primary structures of clastic sedimentary rocks. Laboratory emphasis on bincular microscopic examination and physical properties of unconsolidated sediments and clastic sedimentary rocks. Requires field instruction in stratigraphic mapping methods. Prerequisites: Geol. 312, 520 and 540 or equivalent.

560. Geomorphology. (3). 2R; 3L. Identification and interpretation of the genesis of landforms and a critical examination of processes producing the landforms, including elements of quantitative geomorphology. Requires field trips (instructor's option). Prerequisite: Geol. 111Q.

562. Regional Geology of the United States. (3). A detailed regional survey of the general geology, geomorphology, stratigraphy and structural geology and their interrelationship in the United States. Requires field trips (instructor's option). Prerequisite: Geol. 560 or instructor's consent.

564. Map and Airphoto Interpretation. (3). 2R; 3L. Elements of map and aerial photograph composition; interpretation and application of maps and photos in geography, geography, urban planning, and use; and instruction and engineering works. Introduces remote sensing methods. Requires field trips (instructor's option). Prerequisite: Geol. 111Q or Geol. 201 or equivalent.

570. Biogeology. (3). 2R; 3L. Systematic survey of major fossil biogeological materials, analysis of the origin and evolution of life and paleoecological interpretation of ancient environments and climates. Includes handlens and bincular microscopic examination of major fossil biogeological materials. Includes application of analyzed fossil data to the solution of problems in biogeochronology, paleoecology, paleoclimatology and paleogeography. Cites examples from fields of invertebrate, vertebrate and micropaleontology, and palynology. May require museum and field trips. Prerequisite: Geol. 312 or 552.

574. Special Studies in Biogeology. (3). 2R; 3L. A systematic study in selected areas of biogeology and paleontology. Content differs, upon demand, to provide in-depth analysis in the fields of: (a) invertebrate paleontology, (b) vertebrate paleontology, (c) micropaleontology, (d) geochemistry and (e) paleoecology. Gives appropriate laboratory instruction in the systems, taxonomy and biogeological relationships within the selected fields listed. May require field trips. Repeatable for credit to cover all five areas listed.

581. Numerical Geology. (3). 2R; 3L. Treatment of numerical data in geology, including univariate and bivariate statistics and elementary programming in FORTRAN. A study of geological data and computer techniques used to analyze them as well as case histories of applications are emphasized. Prerequisites: Geol. 111Q, Stat. 570, CS 200Q and 201 or instructor's permission.

621. Geochemical Cycling. (3). The chemistry of earth materials and the important geochemical processes; cycles operating on and within the atmosphere, hydrosphere and lithosphere through time; anthropogenic effects on these cycles today. Prerequisites: Geol. 111Q and Chem. 111Q or instructor's consent.

630. Field Studies in Geology. (2-6). Off-campus, systematic field study in a selected area of geological significance. Course given upon demand and may be repeated for credit when locality and content differ. Where appropriate, travel, lodging and board costs are charged.

640. Field Geology. (6). Field investigation of sedimentary, igneous and metamorphic rock units and their structures. Includes the application of mapping methods in solving geologic problems. Held at an off-campus field camp for five weeks (including weekends). Preparation of geologic columns, sections, maps and an accompanying professionally written report are due on campus during the sixth week. Prerequisite: 12 credits of advanced geology, preferably including a field-mapping methods course with instructor's consent. Offered jointly with Kansas State University.

650. Geohydrology. (3). 2R; 3L. The hydrologic cycle, physical and chemical properties of water; fluid flow through permeable media; water quality and pollution; and water law. Prerequisites: Geol. 552 and Math. 243 or instructor's consent.

657. Earth Science Instructional Methods. (3). Practice in teaching an introductory course in the earth sciences. Developing and presenting the latest scientific laboratory techniques and evaluation of their effectiveness. May require field trips. Requires more than once if content and objectives differ. Prerequisite: senior standing and department chairperson's permission.


680. Economic Geology. (3). 2R; 3L. Occurrence of metallic and nonmetallic economic mineral deposits and the physiochemical principles governing their origin. Also includes a laboratory examination of ores and industrial minerals and elements of mineral beneficiation. May require field trips. Prerequisite: Geol. 324.

682. Petroleum Geology. (3). 2R; 3L. The origin, migration and accumulation of oil and gas in the earth's crust; reservoir trap types in common hydrocarbon fields, origin and types of porosity systems and distribution of world petroleum supplies. Includes subsurface methods, including laboratory, logging, testing and treatment, valuation and economic rocks. Prerequisites: Geol. 312 or 552.

684. Subsurface Geology. (3). 2R; 3L. All subsurface methods, including laboratory, logging, testing and treatment, valuation and mapping methods. Requires field trips (instructor's option). Prerequisites: Geol. 682 and Phys. 214Q or equivalent.

690. Special Studies in Geology. (1-3). Systematic study in selected areas of geology. Content differs and is repeatable for credit. Requires laboratory work on field trips (instructor's option). Offered on demand. Prerequisite: instructor's consent.

698. Independent Study in Geology. (1-3). Independent study on special problems in the field of geology: (a) general, (b) mineralogy, (c) petrology, (d) structural, (e) paleontology, (f) economic geology, (g) sedimentology, (h) stratigraphy, (j) geophysics and (k) petroleum. Independent study in selected areas of geology with a required written final report. Prerequisite: consent of sponsoring faculty.
research. Required of all new degree-seeking graduate students.

The origin and genetic description of carbonate sediments and rocks, mineralogy and textural classification; depositional environments in carbonate rocks and analysis of modern and ancient depositional systems. May require field trips. Prerequisites: Geol. 520 or equivalents.

An in-depth analysis of diagenesis of carbonate sediments and rocks. Includes mineralogic stability in natural waters, meteoric, marine and deep-burial diagenesis, dolomitization processes and products; trace elements and isotopes as diagenetic tools, cathodoluminescence and x-ray diffraction studies of carbonates; origin and porosity. Prerequisites: Geol. 520 (unless waived by instructor) and 726.

The major in history provides a program that is varied and flexible enough to answer the needs for an integrated, liberal education. The program has five areas of concentration: the ancient and medieval world, modern Europe, England, the United States and general history.

Courses also are offered in such areas as urban history, military history, women in history, popular culture, family history and the holocaust.

The history major, often in combination with courses in other disciplines, touches many fields of endeavor, providing flexibility for entrance into a wide variety of career opportunities, including law, professional writing, teaching, communications, business, government and public affairs.

Major. A major in history requires a minimum of 29 hours. History majors must specialize in one of the following areas:

1. Ancient and medieval history—requires Hist. 101G plus one additional lower-division course
2. Modern European history—requires Hist. 102G plus one additional lower-division course
3. English history—requires Hist. 113 or 114 plus one additional lower-division course
4. U.S. history—requires Hist. 131Q or 132Q plus one additional lower-division course
5. General history—requires two lower-division courses.

Nine upper-division hours are to be selected from courses in each appropriate area and must be chosen in consultation with an adviser. All history majors must
take Hist 300 and 698. In addition, sufficient hours need to be elected to bring the total to 29. At least six of these hours must be upper-division hours that are not in the area of specialization. Hist. 108G and 330G may not be used toward the history major. Hist. 108G may not be used toward the history minor.

Minor A minor in history consists of 15 hours, including a maximum of two lower-division courses and at least three upper-division courses.

Teaching of History. Because Kansas Department of Education regulations governing the certification of secondary history teachers are very specific, students planning to be teachers of history should contact a secondary social studies adviser in the College of Education for program planning beyond the requirements of the history major.

Lower-Division Courses

100G. The Human Adventure: World Civilization Since 1500. (3). Division A course/elective. An introductory history of the human experience during the past five centuries, with attention given to the major social, cultural, economic and political traditions of Asia, Africa and the Americas as well as Europe.

101G & 102G. History of Western Civilization. (3 & 3). Division A course/elective. 101G: prehistory to 1648. 102G: 1648 to the present.

106Q. The Way it Was: Western Civilization in Film. (3). Division A course/elective. Selected topics in the history of Western civilization on topics dealt with in films from the 17th century to the present. Not open to history majors or to those with credit in Hist. 101G and 102G.


131Q & 132Q. History of the United States. (4 & 4). Division A course/elective. 131Q: survey from the colonial period through the Civil War. 132Q: survey from Reconstruction to the present.

159. Workshop in History. (2-3).

200. Introduction to Historical Research and Writing. (3). Basic instruction in research methodology, composition and criticism. Required of history majors.

213. American Popular Culture. (3). Cross-listed as Am. St. 213. An examination of popular culture from colonial times to the present emphasizing the media explosion since the Civil War. Looks at the American past through the eyes of mass-man, suggesting that mass-man experienced the past differently from what traditional surveys indicate. Such topics as popular music, cinema, pulp magazine literature, the mass selling of public issues, family life, fashion and familiar items of household technology are treated seriously rather than as sidelines to the more serious business of politics and finance.

220. Media Courses in History. (2-3). Courses created or coordinated by the Department of History which are offered through various media: radio, television and newspaper. Areas of historical emphasis vary from course to course.

222. East Asia. (3). Cross-listed as Pol. S. 222, LAS-I 222Q and Rel. 222Q. A survey of basic topics on China, Korea and Japan, including history, culture, society, philosophy, religion, politics and economics. Taught by a team of instructors from several departments.

225. Your Family in History. (3). Bridges the gap between history and genealogy through demonstrations of the kinds of research techniques available to those who are interested in creating a family history. Students demonstrate understanding of these techniques in a family history project.

Upper-Division Courses

310. Special Topics in History. (2-3). Repeatable twice for credit. Prerequisite: departmental consent.

311 & 312. History of Latin America. (3 & 3). 311: a study of Spanish and Portuguese colonization of America. 312: an examination of the national period from the wars of independence to the present.

313 & 314. English History. (3 & 3). 313: from the earliest times to the beginning of the Stuart period, emphasizing the origins of the development of institutions, customs and nationalism. 314: from the beginning of the Stuart period to the present.

315. American Business: The First Century. (3). Beginning at the ratification of the Constitution and extending to 1900, course examines innovation in management and the contributions of specific individuals and companies to American economic growth. Emphasizes philosophical and physical prerequisites, the maturation of the corporation, the role of government, the marketing of scientific discovery, labor-management relations, the uses of wealth and the foundation of American business in a changing society. Case studies and student investigations supplement analysis of eras and topics. Credit not granted for both Hist. 315 and Econ. 100 or Am. St. 110.

316. American Business: The Second Century. (3). Begins with 1900 and extends to the present, with some informed speculation about the future of American private enterprise. Examines in detail a representative incident in the history of specific companies. Emphasizes government regulation, market trends, business cycles, technological change, business and society, the U.S. in world trade, changes in corporate organizational structure and management technique, ethic and lifestyle in American companies, economic thinkers, business biography and the business history of Wichita and Kansas. Case studies and student investigations supplement analysis of eras and topics. Credit not granted for both Hist. 316 and Econ. 100 or Am. St. 110.

320. Russian History Survey. (3). A survey of Russian history from 862 A.D. to the present.


340. World War II. (3). An introduction to the background and causes of World War II, as well as the military diplomatic, economic, psychological and scientific dimensions of the war. Considers the legacy of the war in light of the postwar world.

481. Cooperative Education. (1-3). The cooperative program would cover work done at museums or archival divisions of libraries. Cannot be included for a history major or minor. Offered Cr/NCr only. Prerequisites: departmental consent.

Courses for Graduate/Undergraduate Credit

501. The American Colonies. (3). Colonization of the New World emphasizing the British colonists and their development.

502. The American Revolution and the Early Republic. (3). Examination of selected phases of the revolutionary, confederation and federal periods.

503. The Age of Jefferson and Jackson. (3). Political, economic and cultural development of the United States from the election of Thomas Jefferson to the end of the Mexican War emphasizing the growth of American nationalism.

504. Civil War and Reconstruction. (3). A study of the origins and military events of the American Civil War and the political and social ramifications of the conflict through 1877.

505. America's Gilded Age, 1877 to 1900. (3). Emphasizes roots of urban problems, foundations of dissent policy toward minority groups and evaluation of imperial expansion.

507. The United States: the 20th Century, 1900-1945. (3). Examines political, social, and economic issues from the Progressive Era through World War II.


518: American constitutional development from Reconstruction to the present.


525. American Military History. (3). A history of the military in America, from the colonial period to the present, emphasizing warfare and military institutions and their impact on American social, economic and political traditions.

529. Indians of Kansas. (3). History of Indian occupation of the Kansas region from initial white contact to the present. Emphasizes Indian-white relations in the 19th century, forced removal of the emigrant tribes, inter tribal and intra tribal relations and consequent legal and cultural problems.


531. American Environmental History. (3). Looks at the history of human interaction with the physical environment in North America emphasizing the U.S. Addresses the ebb and flow of consciousness about the environment, from its roots in the 19th century to the rise of conservation, preservation and environmentalism in the 20th century. Also covers the response to environmental consciousness, addressing the development of technology and the systems designed to regulate it. Considers environmentalism and its relationship to American values, the impact of technology on indigenous cultures, and the role of elitism in the environmental movement and the trendiness of the topic in American society today.

533. The American City: from Village to Metropolis. (3). A study of urbanization and urban life from colonial times to the present—changing life-styles and thought patterns, urban architecture, ethnic assimilation, emergence of the suburb, political and ecological adjustments and the influence of new technology and forms of business organization.

534. History of the Old South. (3). An examination of Southern civilization prior to the American Civil War.

535Q. History of Kansas. (3). Division A course/ elective. History of the Kansas region from Spanish exploration to the present, emphasizing the period after 1854.

537. The Trans-Mississippi West. (3). Spanish, French and Anglo-American penetration and settlement west of the Mississippi River from the 16th century to about 1900.

538. The American West in the Twentieth Century. (3). Explores the growth of the trans-Mississippi West in the 20th century, with particular attention to political development, economic growth, cultural manifestations, the role of minority groups and the impact of science and technology.

539. Indian-White Relations in North America. (3). Indian life, culture and history from the early 16th century to the present emphasizing the impact of federal Indian policy since 1800.

541. Modern France. (3). History of the major trends in French history from Napoleon to DeGaulle emphasizing French attempts to adjust politically, socially, economically and culturally to the changing conditions of modern industrial society.

545Q. Neither War Nor Peace: The World Since 1945. (3). Division A course/ elective.

553. History of Mexico. (3). Pre-Colombian Mesoamerica; the Spanish conquest and the colonial period; the independence movement; Juarez, the Reform and the French intervention; the Porfiriato; the Mexican Revolution; Mexico in recent years.

558. The Ancient Near East. (3). Political and cultural history of ancient Mesopotamia, Iran, Egypt, Palestine, Syria and Asia Minor to the death of Alexander the Great.

559Q & 560. Greek History. (3 & 3). 559Q: Division A course/ elective; the Hellenic world from prehistoric times to the end of the Peloponnesian War. 560: the 4th century and the Hellenistic period.


566 & 567. Medieval History. (3 & 3). 566: the history of Europe from the fall of the Roman Empire through the Crusades, 500 to 1200. 567: history of Europe, 1200 to 1500.

575Q. The Italian Renaissance. (3). Division A course/ elective. Italian history from the 14th through the 16th centuries emphasizing cultural achievements.

576. The Reformation. (3). Cross-listed as Rel. 476. The great religious changes in the 16th century in the political, social and intellectual contexts.

581. Europe, 1815-1870. (3).

582. Europe, 1870-1914. (3).


588. History of Early Russia. (3). Covers the social, political, and cultural history of Kievan and Muscovite Russia.

590. History of Russia. (3). Political and cultural history of Kievan, Muscovite and Imperial Russia.

591. Imperial History. (3). A survey of the political, social, and cultural history of Imperial Russia.


595. Soviet Union Today. (3). An examination of contemporary life in the USSR: historical background, Marxist/Leninist ideology, industrial and agricultural economies, roles played by women, national minorities and dissidents in Soviet society, the press, literature and art, health care, and prospects for the country's future.

613. European Diplomatic History. (3). European international politics and diplomatic practices, emphasizing the actions of the great powers and their statesmen. Versailles settlement, totalitarian aggression, appeasement, World War II, the cold war and decolonization of Southeast Asia and the Middle East as prelude to major power involvement.

615. Hitler and the Third Reich. (3). The establishment and collapse of the Weimar Republic, the rise and fall of Hitler's Third Reich, the divided Germany of the present and the role of each in world affairs, 1914 to the present.

616. Germans and Jews. (3). The history of antisemitism in central Europe, 19th and 20th centuries.

617Q. The Holocaust. (3). Division A course/ elective. The origins and development of the concentration camp system in Nazi Germany and its transition into a death camp system.

620. Media Courses in History. (2-3). Courses created or coordinated by the Department of History, offered through various media: radio, television and newspaper. Areas of historical emphasis vary. Repeatable with instructor's approval; however, three hours maximum credit will apply towards MA degree in history.

698. Historiography. (3). Review of the major schools of historical thought, philosophies of history and eminent historians from the ancient world to the present. Required of history majors.

701. Introduction to Public History. (3). Introduces the various areas of public history including historic preservation, archival administration, museum studies, litigation support and corporate history. Students learn the philosophies, techniques and practices that comprise the field and ways these areas interact with their academic training. Prerequisite: graduate standing or instructor's consent.

702. Historic Preservation. (3). Advanced survey of the multifaceted, multidisciplinary field of historic preservation in a broad and sophisticated view of the many arms of preserv-
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Geography

Only courses 201 and 235 are intended as physical science courses. All other geography courses are intended as social science offerings.

Geography Minor. A minor in geography consists of at least 15 hours including Geog. 125Q or 201 or the equivalent.

Lower-Division Courses

125Q. Principles of Human Geography. (3). Division II course/elective. An introductory course that examines the development of human and cultural landscapes.

150. Workshop in Geography. (1-4). Short-term courses focusing on geographical problems. Prerequisite: instructor’s consent.

201. Physical Geography. (3). 2R; 3L. Lab fee. Emphasizes the physical basis of geography, including climate, terrain, soils, landforms and the atmosphere; emphasizes competing geophysical elements; introduction to regional studies. Field trips are required at the option of the instructor.

210Q. World Geography. (3). Division II course/elective. A general survey of world geography including an analysis of the physical, political, economic, historical and human geography of the major world regions.

225. Meteorology. (3). 2R; 2L. Lab fee. An introductory study of the atmosphere and its properties and the various phenomena of weather. Includes a brief survey of important principles of physical, dynamic, synoptic and applied meteorology. Does not apply toward a major or minor in geography. Requires field trips at the option of the instructor. Prerequisite: instructor’s consent.

262Q. Cultural Geography. (3). An introduction to cultural geography emphasizing man’s geographical distributions, the spatial aspects of his cultural activities, the sources and techniques of his livelihood and the relationships to his environment.

Upper-Division Course

320. Field Studies in Geography. (1-6). Off-campus, systematic field study in a selected area of geographic significance. Course given upon demand and may be repeated for credit when the locality and content differ. Where appropriate, travel, lodging and board costs are charged.

Courses for Graduate Students Only


802. Thesis. (2).

803. Internship in Public History. (1-2). Public History students practice their skills in summer or semester internships. Type and level of responsibility vary depending on student’s interests and work setting. Internship should be in an area related to student’s MA thesis. Prerequisite: Hist. 701 and consent of public history faculty.

810. Special Topics in History. (1-3). Open only to graduate students. Repeatable for credit to a maximum of six hours.


542. Geography of Europe. (3). Physical, political, economic, historical and human geography of Europe.

580. Economic Geography. (3). A geographical analysis of the distribution and utilization of basic world resources.

620. Field Studies in Geography. (2-5). Off-campus, systematic field study in a selected area of geographic significance. Course given upon demand and may be repeated for credit when the locality and content differ. Where appropriate, travel, lodging and board costs are charged.

630. Geography of Mexico. (3). Physical, human and cultural geography of Mexico, including important archaeological and historical settings. Relations of sources to arts, crafts, industry and architecture.

670. Urban Geography. (3). 2R; 3L. Lab fee. Geography of cities, the origin, growth, functions, characters and environmental problems of urban areas; structure and dynamic elements of intrasite urban space; land-use analysis and approaches to urban planning and problems of urban ecology.

695. Special Studies in Geography. (1-3). 3R or 2R; 3L. Lab fee. (Lab is included when appropriate.) Systematic study in a selected area of topical interest in geography. Course given on demand and is repeatable for credit when content differs. May require field trips. Prerequisite: junior standing.

750. Workshop in Geography. (1-4). Short-term courses with special focus on geographical problems. Prerequisite: instructor’s consent.

Course for Graduate Students Only

820. Field Studies in Geography. (2-6). Off-campus, systematic field study in a selected area of geographic significance. Course given upon demand and may be repeated for credit when the locality and content differ. Where appropriate, travel, lodging and board costs are charged. Prerequisite: instructor’s consent.

Interdisciplinary Liberal Arts and Sciences Program

Lower-Division Courses

101. Regents Honors Academy 1. (3). Course material, the content of which is derived from Liberal Arts and Sciences and provides an interdisciplinary focus, is specifically designed for Kansas Regents Honors Academy. Prerequisite: restricted to members of the Kansas Regents Honors Academy.

102. Regents Honors Academy 2. (3). Course material, the content of which is derived from Liberal Arts and Sciences and provides an interdisciplinary focus, is specifically designed for Kansas Regents Honors Academy. Prerequisite: restricted to members of the Kansas Regents Honors Academy.
22Q. East Asia. (3). Cross-listed as Hist. 222, Pol. S. 222 and Rel. 222Q. Division A course/elective. A survey of basic topics on China, Korea and Japan, covering the period from 5000 B.C. to the present, including geography, prehistory, history, culture, anthropology, society, philosophy, religion, politics and the economics of each country. Taught by a team of instructors from several departments.

281. Cooperative Education. (1-4). Provides employment opportunities or approves current employment, when appropriate, to integrate academic theory with planned professional experience. Individualized programs must be formulated in consultation with and approved by appropriate faculty sponsors. May be repeated. Offered C/R/NCR only.

Upper-Division Courses

300G. Peace and War: Global Issues. (3). Division A course/elective. An introduction to the study of conditions which have led to war or peace in the past and which may do so now in a nuclear age. Presents diverse viewpoints on worldwide issues from the perspectives of the natural and social sciences, the arts and humanities and applied studies.

398. Travel Seminar. (1-4). An interdisciplinary travel seminar: a study of culture that includes observations of art and architecture and field methods course and is repeatable for credit when different languages are offered. Prerequisite: Ling. 315.

Group B-Linguistic Study of Specific Languages or Language Groups

Courses for Graduate/Undergraduate Credit


682. Linguistics. Structure of a Selected Non-Indo-European Language. (3). Language offered depends on student demand and availability of staff. Course may be conducted as a field methods course and is repeatable for credit when different languages are offered. Prerequisite: Ling. 315.

Italian, Japanese, Latin

See Modern and Classical Languages and Literatures.

Linguistics

The Bachelor of Arts degree in linguistics was phased out beginning in 1987; however, students presently enrolled in the program will be accommodated. An emphasis in linguistics is available through the general studies program.

Group A—Basic Linguistic Theory

Lower-Division Courses

151G. The Nature of Language. (3). Division A course/elective. An overview of the important facts about what language is and how it works and of the ways in which researchers in linguistics and in other disciplines, such as psychology, philosophy and anthropology, explain and make use of language.


Upper-Division Course


Courses for Graduate/Undergraduate Credit


682. Linguistics. Structure of a Selected Non-Indo-European Language. (3). Language offered depends on student demand and availability of staff. Course may be conducted as a field methods course and is repeatable for credit when different languages are offered. Prerequisite: Ling. 315.

Other Languages

Lower-Division Course

292. Linguistics. Special Studies. (2-3). Topic selected and announced by individual instructor. Credit is assigned to Group A, B or C depending on content. Repeatable for credit when content varies.

Courses for Graduate/Undergraduate Credit

590. Linguistics. Special Studies. (2-3). Topic selected and announced by individual instructor. Credit is assigned to Group A, B or C depending on content. Repeatable for credit when content varies.


Mathematics and Statistics

Mathematics

Note: For ease of description, certain courses in mathematics and statistics are categorized in the following groups (the courses in Group R are required of all majors):

Group R: Math. 415, 511, 550, 551
Group A: Math. 545, 547
Group B: Math. 513, 615, 621, 690, 720, 725
Group C: 460, 471, Stat. 571, 572, 574, 576, 771, 772

Major.* For the Bachelor of Arts (BA) degree with a major in mathematics, students must complete all courses in Group R and one each from Groups A and B. In addition, the BA candidate must complete Math. 531 and two additional courses from those listed in Groups A, B, C and D.

For the Bachelor of Science (BS) degree in mathematics, students must complete all courses in Group R and one each from Groups A, B, C and D. In addition, the BS candidate must complete two additional courses from those listed in Groups C and/or D.

For the Bachelor of Science (BS) degree in mathematics with emphasis in statistics, students must complete all courses in Group R and one course in Group A. In addition, the BS candidate must complete Math. 553 and 15 additional hours of courses in Group C or D with a statistics prefix which must include either Stat. 571-572 or Stat. 771-772. Students under this option may select statistics courses from other departments with the due approval of the Department of Mathe-
matics and Statistics.

For students who are contemplating graduate work it is highly recommended that they include Math. 513, 547 and 640 in their program, along with courses in one or more of French, German or Russian.

Students majoring in mathematics should consult closely with their mathematics adviser on any of these programs.

Minor. For a minor in mathematics, students must complete the calculus sequence (242Q, 243, 344) and take at least one additional upper-division course approved by both the Department of Mathematics and Statistics and the student's major department.

*All bachelor degrees in mathematics require a high-level algorithmic computer language such as FORTRAN or Pascal.

Noncredit Courses

007. Arithmetic. (3). Offered Cr/Ncr only. A review and study of the basic arithmetic operations for the nature student whose previous training in arithmetic is inadequate for completion of college mathematics courses.

011. Beginning Algebra. (5). Offered Cr/Ncr only. Content consists of algebraic topics usually covered in the first year of a standard high school algebra course. Not applicable to degree.

012. Intermediate Algebra. (5). Offered Cr/Ncr only. Content consists of topics usually covered in the second year of a standard high school algebra course. Prerequisite: Math. 011 or one year of high school Algebra. Qualifying score in recent department placement exam. Not applicable to degree.

021. Plane Geometry. (6). Offered Cr/Ncr only. For students without high school credit in plane geometry. Course may be used to meet departmental prerequisites in place of one unit of high school geometry. Prerequisite: one unit of high school algebra. Math. 011 or concurrent enrollment in Math. 011. Not applicable to degree.

Lower-Division Courses

101Q. Mathematics Appreciation. (3). Elementary topics in mathematics of interest to persons in other fields. Especially for persons majoring in nontechnical fields. No credit toward a major or minor in mathematics.

111. College Algebra. (3). A survey of functions, theory of equations and inequalities, complex numbers and exponential and logarithmic functions. High school geometry or Math. 021 is a highly-recommended preparatory course. Prerequisites: Math. 012 or two years of high school Algebra, qualifying score in recent department placement exam. Credit is allowed in only one of the two courses Math. 111 and Math. 112.

112. Precalculus Mathematics. (5). Functions, theory of equations and inequalities, complex numbers, the trigonometric functions, exponential and logarithmic functions and other standard topics prerequisite to a beginning study of calculus. Course is not available for credit to students who have received a grade of C or better in Math. 242Q or its equivalent. Prerequisites: one and one-half units of high school algebra or Math. 011, and one unit of high school geometry or Math. 021. Credit is allowed only in one of the three courses Math. 111 or 112.

123. College Trigonometry. (3). Studies the trigonometric functions and their applications. Credit in both Math. 123 and 112 is not allowed. Prerequisite: Math. 111 with C or better or equivalent high school preparation, and one unit of high school geometry or Math. 021.

144. Business Calculus. (3). A brief but careful introduction to calculus for students of business and economics. Credit in both Math. 144 and 242Q is not allowed. Prerequisite: Math. 111 or 112 with a grade of C or better or equivalent high school preparation.

150. Workshop in Mathematics. (1-3). Topics of interest to particular students and not elsewhere available in the curriculum. May be repeated for a total of six hours credit with departmental consent. Prerequisite: departmental consent.

211. Elementary Linear Algebra. (3). Covers topics in linear algebra together with elementary applications. Prerequisite: one and one-half units of high school algebra or Math. 011.

242Q. Calculus I. (5). Division C course/elective. Analytic geometry and the calculus in an integrated form. Credit in both Math. 242Q and 144 is not allowed. Prerequisites: Math. 112 with a grade of C or better or two units of high school algebra, and one unit of high school geometry and one-half unit of high school trigonometry, or Math. 123 and either Math. 123 or Math. 111 with a grade of C or better in each.

243. Calculus II. (5). A continuation of Math. 242Q. Includes a study of integration and applications and an introduction to infinite series. Prerequisite: Math. 242Q with a grade of C or better.

Upper-Division Courses

306G. The Evolution of Mathematics. (3). Division C course/elective. A study of mathematics and mathematicians from antiquity to the present; to see how mathematics has developed from man's efforts to understand the world and the extent to which mathematics has molded our civilization and culture. Since mathematics is what mathematicians do, the lives of mathematicians from various ages and countries are studied. Not a mathematics course.

311. Introduction to Linear Algebra. (1). A study of sets of linear equations, matrices, vectors, eigenvalues and eigenvectors. Credit not allowed in both Math. 211 and 311. Prerequisite: Math. 344 or concurrent enrollment.

331Q. Discrete Mathematics I. (3). Division C course/elective. A study of some of the basic topics of discrete mathematics, including elementary logic, properties of sets, mathematical induction, counting problems using permutations and combinations, trees, elementary probability and an introduction to graph theory. Prerequisite: Math 111 or 211 or equivalent college-level mathematics course.

344. Calculus III. (5). A continuation of Math. 245. Includes a study of multiple integration and partial derivatives. Prerequisite: Math. 245 with a grade of C or better.

415. An Introduction to Advanced Mathematics. (3). Develops the concept of proof in a setting of mathematical tools needed in advanced courses. Covers topics in number theory, algebra and analysis. Particular attention to equivalence relations, functions, induction and mathematical systems. Prerequisite: Math. 344 with a grade of C or better.

480. Individual Projects. (1-5). Repeatable up to ten hours. Prerequisite: departmental consent.

Courses for Graduate/Undergraduate Credit

Credit in courses numbered below 600 is not applicable toward the MS in mathematics.

501. Elementary Mathematics. (6). A study of topics necessary to an understanding of the elementary school curriculum, such as set theory, real numbers and geometry. Not for major or minor credit. Prerequisites: elementary education major and Math. 111 or equivalent or departmental consent.

511. Linear Algebra. (3). An elementary study of linear algebra, including an examination of linear transformations and matrices over finite dimensional spaces. Prerequisite or corequisite: Math. 243 with a grade of C or better.

513. Fundamental Concepts of Algebra. (3). Defines group, ring and field and studies their properties. Prerequisites: Math. 415 and 511 with C or better or departmental consent.

530. Applied Combinatorics. (3). Basic counting principles, occupancy problems, generating functions, recurrence relations, principles of inclusion and exclusion, the pigeonhole principle, Fibonacci sequences and elements of graph theory. Prerequisite: Math. 344 with a grade of C or better.

531. Introduction to the History of Mathematics. (3). Studies the development of mathematics from antiquity to modern times. Solves problems using the methods of the historical period in which they arose. Requires mathematical skills. Prerequisites: Math. 511 and two additional courses at the 500 level or above, with C or better in each.

545. Integration Techniques and Applications. (3). A study of the basic integration techni ques used in applied mathematics. Includes the standard vector calculus treatment of line and surface integrals, Green's Theorem, Stokes' Theorem and The Divergence Theorem. Also includes the study of improper inte-
grals with application to special functions. Prerequisite: Math. 344 with grade of C or better.

547. Advanced Calculus I (3). Covers the calculus of Euclidean space including the standard results concerning functions, sequences and limits. Prerequisites: Math. 344 and 415 with C or better in each.

550. Ordinary Differential Equations (3). Includes separation of variables, integrating factors, variation of parameters, undetermined coefficients, LaPlace transform and power series substitution. Credit not allowed in both Math. 550 and 555. Prerequisite: Math. 344 with a grade of C or better.

551. Numerical Methods (3). Approximating roots of equations, interpolation and approximation, numerical differentiation and integration and the numerical solution of first order ordinary differential equations. Some computer use. Prerequisites: Math. 344 with a grade of C or better and a knowledge of FORTRAN, or departmental consent.

555. Ordinary Differential Equations with Linear Algebra (4). Includes separation of variables, integrating factors, variation of parameters, undetermined coefficients, LaPlace transforms, power series substitution, linear algebra, eigenvalue problems and linear systems. Credit not allowed in both Math. 550 and 555. Prerequisite: Math. 344 with grade of C or better.

580. Selected Topics in Mathematics (3). Topic chosen from topics not otherwise represented in the curriculum. May be repeated up to a maximum of six hours credit with departmental consent. Prerequisite: departmental consent.

615. Elementary Number Theory (3). Studies properties of the integers by elementary means. Prerequisite: Math. 344 with C or better or departmental consent.

621. Elementary Geometry (3). Studies Euclidean geometry from an advanced point of view. Prerequisite: Math. 344 with C or better or departmental consent.

640. Advanced Calculus II (3). An examination of the calculus of functions of several variables and line and surface integrals. Prerequisites: Math. 511 and 547 with a grade of C or better.

657. Optimization Theory (3). Introduces selected topics in linear and nonlinear optimization. Develops the revised simplex method along with a careful treatment of duality. Then extends the theory to solve parametric, integer and mixed integer linear programs. Prerequisite: Math. 511 with C or better.

690. Introduction to Mathematical Logic (3). An axiomatic development of elementary mathematical logic through first-order logic culminating in theorems on completeness and consistency. Investigates connections with Boolean algebra, formal languages and computer logic. Prerequisite: Math. 415 or 511 with C or better or departmental consent.

713. Abstract Algebra I (3). Treats the standard basic topics of abstract algebra. Prerequisite: Math. 513 with C or better or departmental consent.

714. Applied Mathematics (3). Cross-listed as Phys. 714. Prerequisite: Math. 550 or instructor's consent.

720. Modern Geometry (3). Examines the fundamental concepts of geometry. Prerequisite: Math. 513 with C or better or departmental consent.

725. Topology I (3). Studies the results of point set and algebraic topology. Prerequisite: Math. 547 with C or better or departmental consent.

743. Real Analysis I (3). Includes a study of the foundations of analysis and the fundamental results of the subject. Prerequisite: Math. 680 with C or better or departmental consent.

745. Complex Analysis I (3). Studies the theory of analytic functions. Prerequisite: Math. 640 with C or better, or departmental consent.

750. Workshop (1-3). Topics appropriate for mathematics workshops that are not in current mathematics courses. May be repeated to a total of six hours credit with departmental consent. Prerequisite: departmental consent.

751. Numerical Linear Algebra (3). Includes analysis of direct and iterative methods for the solution of linear systems, linear least squares, eigenvalue problems, error analysis and reduction by orthogonal transformations. Prerequisite: Math. 511, 547 and 551 with C or better in each, or departmental consent.

755. Partial Differential Equations I (3). Studies the existence and uniqueness theory for boundary value problems of partial differential equations of all types. Prerequisite: Math. 547 with C or better or departmental consent.

757. Engineering Mathematics I (3). Includes Fourier series, the Fourier integral, boundary value problems for the partial differential equations of mathematical physics, Bessel and Legendre functions and linear systems of ordinary differential equations. No credit for this course toward a graduate degree in mathematics. Prerequisite: Math. 550 or 555 with C or better.

758. Engineering Mathematics II (3). A survey of some of the mathematical techniques needed in engineering including an introduction to vector analysis, line and surface integrals and components analysis, contour integrals and the method of residues. No credit for this course toward a graduate degree in mathematics. Prerequisite: Math. 550 or 555 with grade of C or better.

Courses for Graduate Students Only

813. Abstract Algebra II (3). A continuation of Math. 713. Prerequisite: Math. 713 or equivalent.

818. Selected Topics in Number Theory (2-3). Repeatable with departmental consent. Prerequisite: departmental consent.

825. Topology II (3). A continuation of Math. 725. Prerequisite: Math. 725 or equivalent.

828. Selected Topics in Topology (2-3). Repeatable with departmental consent. Prerequisite: departmental consent.

829. Selected Topics in Geometry (2-3). Repeatable with departmental consent. Prerequisite: departmental consent.

839. Selected Topics in Foundations of Mathematics (2-3). Repeatable with departmental consent. Prerequisite: departmental consent.

843. Real Analysis II (3). A continuation of Math. 743. Prerequisite: Math. 743 or equivalent.

845. Complex Analysis II (3). A continuation of Math. 745. Prerequisite: Math. 745 or equivalent.

848. Calculus of Variations (3). Includes Euler-Lagrange equations, variational methods and applications to extremal problems in continuum mechanics. Prerequisite: Math. 547 or 757.

849. Selected Topics in Analysis (2-3). Repeatable with departmental consent. Prerequisite: departmental consent.


852. Numerical Analysis of Partial Differential Equations (3). Includes analysis of algorithms for the solution of initial value problems and boundary value problems for systems of PDEs with applications to fluid flow, structural mechanics, electromagnetics, etc. Prerequisite: Math. 751.

854. Tensor Analysis with Applications (3). After introducing tensor analysis, considers applications to continuum mechanics, structural analysis and numerical grid generation. Prerequisite: Math. 545 or 757.


857-858. Selected Topics in Engineering Mathematics I and II (3-3). Advanced topics in mathematics of interest to engineering students, including tensor analysis, calculus of
variations and partial differential equations. Not applicable toward the MS in mathematics.

859. Selected Topics in Applied Mathematics. (2-3). Repeatable with departmental consent.

860. Proseminar. (1). Oral presentation of research in areas of interest to the students. Prerequisite: major standing.

881. Individual Reading. (1-5). Prerequisite: departmental consent. Repeatable up to a maximum of six hours with departmental consent.

885. Thesis. (1-4). May be repeated to a maximum of six hours credit. Prerequisite: departmental consent.


952. Advanced Topics in Numerical Analysis. (3). Advanced topics of current research interest in numerical analysis. Topics chosen at instructor's discretion. Possible areas of concentration are numerical methods in ordinary differential equations, partial differential equations and linear algebra. Prerequisites: Math. 751, 851 and instructor's consent.

958 & 959. Selected Advanced Topics in Applied Mathematics. (0 & 3). Topics of current research interest in applied mathematics. Repeatable for credit with departmental consent. Prerequisite: instructor's consent.

981. Advanced Independent Study in Applied Mathematics. (1-3). Arranged individually directed study in an area of applied mathematics. Repeatable to a maximum of six hours. Prerequisite: must have passed the PhD qualifying exam and instructor's consent.

985. PhD Dissertation. (1-9). Repeatable to a maximum of 24 hours. Prerequisite: must have passed the PhD preliminary exam.

Statistics

No major or minor in statistics is available, but a B5 degree with emphasis in statistics is offered as described under the mathematics section. Statistics courses satisfy general education requirements. As part of the 124 semester hours required for graduation, students may take up to 15 semester hours of statistics courses in addition to the 45 or 50 semester hours of course work allowed in mathematics.

Lower-Division Course

170Q. Statistics Appreciation. (3). A nontechnical course stressing and explaining how statistics and probability help solve important problems in a variety of fields (e.g., biology, economics, education, government, health sciences, social sciences, etc.). The material is developed by examples rather than by traditional statistical methods and does not require any special knowledge of mathematics.

Upper-Division Courses

360Q. Elementary Probability. (3). Division C course/elective. Includes probability functions, random variables and expectation of limited sample spaces. Prerequisite: Math. 111 with C or better or equivalent.

370. Elementary Statistics. (3). Surveys elementary descriptive statistics, binomial and normal distributions, elementary problems of statistical inference, linear correlation and regression. Not open to mathematics majors. Prerequisite: Math. 111 with C or better or equivalent.

460. Elementary Probability and Mathematical Statistics. (3). Covers elementary probability concepts, some useful discrete and continuous distributions and mathematical aspects of statistical inference including maximum likelihood estimation, confidence intervals, hypothesis testing and regression. Prerequisite: Math. 243 with grade of C or better.

471. Probabilistic Models and Statistical Methods. (3). Covers axioms of Probability, Bayes' Theorem, random variables and their distribution, joint distributions of random variables, transformations of random variables, moment generating function, characteristic functions, central limit theorem and other topics with applications to engineering. Prerequisite: Math. 344 with a grade of C or better.

Courses for Graduate/Undergraduate Credit

Credit in courses numbered below 600 is not applicable toward the MS in mathematics.

570. Special Topics in Statistics. (3). Covers topics of interest not otherwise available. Prerequisite: departmental consent.

571-572. Statistical Methods I and II. (3-3). Includes probability models, points and interval estimates, statistical tests of hypotheses, correlation and regression analysis, introduction to nonparametric statistical techniques, least squares, analysis of variance and topics in design of experiments. Prerequisite: Math. 243 with C or better or departmental consent.

574. Elementary Survey Sampling. (3). Reviews basic statistical concepts. Covers simple, random, stratified, cluster and systematic sampling, along with selection of sample size, ratio, estimation and costs. Applications studied include problems from the social and natural sciences, business and other disciplines. Prerequisite: any elementary course in statistics, such as Stat. 370, Soc. 501 or Psy. 401 with a C or better.

576. Applied Nonparametric Statistical Method...
analysis, James-Stein estimates, multivariate probability inequalities, majorization and Schur functions. Prerequisite: Stat. 652 or departmental consent.

Courses for Graduate Students Only

861. Theory of Probability. (3). The axiomatic foundations of probability theory emphasize the coverage of probability measures, distribution functions, characteristic functions, random variables, modes of convergence, the law of large numbers and central limit theorem, and conditioning and the Markov property. Prerequisites: Math. 743 and Stat. 761 or 771.


875. Design of Experiments. (3). A study of basic concepts of experimental design which include completely randomized design, randomized block design, randomization theory, estimation and tests, latin square design, factorial experiments, confounding, split-plot designs, incomplete block designs and intra- and inter-block information. Prerequisite: Stat. 572 or 772.

876. Nonparametric Methods. (3). An introduction to the theory of nonparametric statistics. Includes order statistics; tests based on runs test of goodness of fit, rank order statistics; one-, two- and k-sample problems; linear rank statistics; measure of association for bivariate samples; and asymptotic efficiency. Prerequisite: Stat. 772.


878. Special Topics. (2-3). Repeatable with departmental consent. Prerequisite: departmental consent.

879. Individual Reading. (1-5). Prerequisite: departmental consent.

884. Statistical Computing II. (3). Teaches special graphics and numerical methods needed in the analysis of statistical data. Includes advanced simulation techniques, numerical methods for linear and nonlinear problems, analysis of missing data, smoothing and density estimation, projection-pursuit methods and graphical techniques. Prerequisites: Math. 751 and Stat. 772 with C or better or departmental consent.

971 & 972. Selected Advanced Topics in Probability and Statistics. (3&3). Topics of current research interest in probability and statistics. Repeatable for credit with departmental consent. Prerequisite: instructor's consent.

975. Advanced Independent Study in Probability and Statistics. (1-3). Arranged individually directed study in an area of probability or statistics. Repeatable to a maximum of 6 hours. Prerequisites: must have passed the PhD qualifying exam and instructor's consent.

986. PhD Dissertation. (1-9). Repeatable to a maximum of 24 hours. Prerequisite: must have passed the PhD preliminary exam.

Minority Studies

The department's objective is to increase the student's cross-cultural communication skills by providing exposure to and an understanding of communication uniqueness among members of America's ethnic/cultural groups, thereby minimizing the barriers that often hamper effective cross-cultural communication.

The department offers courses and programs to stimulate favorable interaction among people, thus reducing ethnic tension. Emphasis in the department is on cross-cultural communication, which stresses the uniqueness of the individual's cultural experiences and resulting behavior which affects communications across ethnic and cultural lines.

Major. The major in minority studies consists of at least 30 hours, including Min. S. 100Q; 210Q; three or more of the following: 220, 240Q, 260, 331, 332, 333, 410, 512; and two of the following: 540, 545, 548.

Certain courses in related areas that meet the particular needs of the student and are approved by an adviser may be counted toward a major. These courses may not count for more than six hours.

Minor. A minor in minority studies consists of at least 18 hours. The courses are to be approved by the student's adviser in the department.

Lower-Division Courses

100Q. Introduction to Minority Studies. (3). Division B course/elective. Orientation to the nature and scope of minority studies. Emphasizes the unique nature of the experience of minority groups in this country. Also covers a cursory examination of some alternative styles of behavior in dealing with problems peculiar to minority people in the United States.

210Q. Fundamentals of Cross-Cultural Communications. (3). Division B course/elective. An examination of the effects of different cultures on language and methods of communicating. Also studies communications and its relationship to behavior in this country.

220. Martin Luther King. (3). A study of the life and philosophy of the Rev. Dr. Martin Luther King Jr. Special emphasis on the motivations, obstacles and social impact of Dr. King's life on the civil rights movement and interracial relations in the United States.

240Q. Minority Women in America. (3). Cross-listed as Wom. S. 240Q. Division B course/elective. An examination of the lives, talents and contributions made by minority women to the American culture. An analysis of the misconceptions about minority women that have been generated and perpetuated through the ages by providing accurate information about their lives and attitudes. To help people relate better to minority women in America and understand their attitudes, sensitivities and emotions.

251Q. Women and Minorities in the Criminal Justice System. (3). Cross-listed as AJ 251Q. Division B course/elective. Examines the role of women and minorities within the criminal justice system from two perspectives: (1) individuals employed by the criminal justice system and (2) individuals who commit crimes and/or are apprehended by the criminal justice system. Emphasizes those facets unique to women and minorities and their interactions with law enforcement, judiciary and corrections.

260. Prominent Minorities in the Making of America. (3). Designed to explore, compare and contrast minority thought and processes for social, economical and political reform. Delves into the social concepts of prominent American minorities through the coverage of popular novels, biographies, autobiographies, rhetoric, etc. Prerequisite: Min. S. 100Q.

Upper-Division Courses

331. The Black Family. (3). Examines the fictional and factual images of black American families from slavery to the present. Primary focus on the adaptive abilities of poor, working class and middle class black families. Prerequisites: Min. S. 100Q, 210Q or instructor's consent.

332. The Native American. (3). Examines contemporary issues facing the Native American with special focus on the Osage tribe. Prerequisites: Min. S. 100Q, 210Q or instructor's consent.

333. Issues in the Chicano Community. (3). Examines a variety of social, psychological and political concerns affecting Mexican Americans. Special attention to the impact of immigration and to the media's role in the portrayal of the Chicana. Prerequisites: Min. S. 100Q, 210Q or instructor's consent.

350. Workshop. (1-4). Focused on the nature and scope of minority studies. Emphasizes the unique nature of the experiences of a specific American minority group.
410. The African American Male. (3). Examines the impact of racism on the role and lifestyle of the African American male in American society. Prerequisite: Min. S. 100Q, 210Q or instructor's consent.

481. Cooperative Education. (1-4). Allows the student to examine the impact of minority status in the work environment. Examine interpersonal interactions, communication and acceptance in and adjustment to the multicultural work environment. Offered Cr/NFr only. Prerequisite: departmental consent.

Courses for Graduate/Undergraduate Credit

512. Issues in Minority Aging. (3). Cross-listed as Geront. 512. Addresses the needs and interests of students who are interested in (1) providing services to the minority elderly; (2) exploring the "issues" of concern to minority elderly; (3) becoming familiar with the rights of older/minority Americans; (4) learning the legal procedures for resolving many of the specific problems of the minority elderly, and (5) offering tried and tested solutions to the problems encountered by minority elderly. Prerequisites: Min. St. 100Q, Geront. 100, Soc. 111Q or instructor's consent.

540. Advanced Cross-Cultural Communications. (3). An advanced study on special topics in human relations. Prerequisite: Min. St. 380 or concurrent enrollment.


580. Individual Projects. (3). Student conducts independent research related to a specific minority group. Prerequisite: 50 hours of Wichita State credit or departmental consent. Repeatable for a total of 6 hours.

725. Concepts of Cross-Cultural Communications. (3). A critical survey of the concepts of cross-cultural communications. An in-depth examination of the rationale used to evaluate different ethnic groups, language and behavior. Course provides a conceptual understanding of special implications and necessary adaptations of communications to, between and among diverse ethnic groups in our society.

750. Workshop. (1-4). Focuses on the nature and scope of minority studies. Emphasizes the unique nature of the experiences of minority groups in this country.

Modern and Classical Languages and Literatures

The Department of Modern and Classical Languages and Literatures works to instill in students an awareness and appreciation of other languages and cultures. The department grants the Bachelor of Arts degree in all languages regularly taught, the Bachelor of Arts in Secondary Education with a major in any of the languages regularly taught, the Master of Arts in Spanish, and the Master of Arts in Liberal Studies with area concentrations in French, German, Greek, Latin or Spanish.

A wide range of courses in language, literature, civilization, translation, and linguistics are offered on campus as well as in summer programs in Puebla, Mexico, and Strasbourg, France. The Wichita State University has a special exchange program with Wichita's French sister city, Orleans. Through this program, students pay their tuition and fees at WSU and do academic work in their chosen field at the Universite d'Orleans. Students receive direct credit at WSU for all credit earned in Orleans. Scholarships are available for the study-abroad programs. In addition, the Eugene Savalino scholarship is given to one outstanding high school senior who plans to major in any of the romance languages at Wichita State. Graduate students interested in applying for teaching assistantships and graduate research assistantships should consult the graduate catalog or the graduate coordinator.

Chinese

Lower-Division Courses

111. Elementary Chinese I. (5). An introduction to the Chinese language emphasizing the basic elements of learning the fundamentals of speaking, understanding, reading and writing modern Chinese.

112. Elementary Chinese II. (5). Continuation of Chinese 111; emphasizes learning the fundamentals of pronunciation, speaking, understanding, reading and writing the language. Prerequisite: Chinese 111 or an equivalent learning experience.

220. Intermediate Chinese. (5). Continues development of speaking, reading and writing skills. Prerequisite: Chinese 112 or departmental consent.

French

Major. A major in French consists of a minimum of 33 semester hours beyond Fren. 112 or its equivalent, and must include the following courses: Fren. 220, 223, 227, 300, 526, 551 or 552 or equivalent. In addition, 15 hours must be selected from courses numbered above 500. No fewer than nine hours must be literature.

Related Fields. In addition to the above courses, it is strongly recommended that French majors take courses in related fields such as other foreign languages, art history, English, history and philosophy.

Student Teachers. Students who plan to teach French should consult with the department's professor in charge of teacher education early in their college careers. In addition to the major requirements, it is recommended that future teachers take courses beyond the general education requirements in other foreign languages, history, art history, English or philosophy. It is also recommended that future French teachers spend at least a summer in a French-speaking country before student teaching.

Requirements for entering this program are:

1. Grade point average of 3.000 or higher in French
2. Special departmental approval based on demonstrated proficiency in the use of both oral and written French (not based on course grades)
3. Basic courses in education required by the Teacher Education Program (see College of Education).

Minor. A minor in French consists of a minimum of 12 semester hours beyond Fren. 112 and must include Fren. 220, 223, 300 and one upper-division French course numbered 500 or above.

Native Speakers. Native and near native speakers of French are not permitted to take courses at the 100 or 200 level but must take a minimum of 12 upper-division semester hours in order to complete a minor in French. These students are advised to consult with a French professor before enrolling in French courses.

High School French. Students who have completed more than two units of high school French should consult with an adviser in the French department before enrolling in French courses.

Lower-Division Courses

111-112. Elementary French. (3-5). An introductory course emphasizing speaking, reading, writing and grammar essentials. Requires daily classroom and laboratory work.

150. Workshop in French. (2-4). Repeatable for credit.

210Q. Intermediate French. (5). Division A course/elective. French courses emphasizing conversation, folklore and modern culture. Prerequisite: two units of high school French or Fren. 112 or departmental consent.

215. Study Abroad. (3-6). Transfer of credit from a French-speaking university in (a) grammar, (b) conversation, (c) reading.

220. Intermediate French Grammar and Composition. (3). A review of elementary French grammar designed to improve proficiency in written expression through use of various tenses and turns of phrase in composition assigned on a regular basis. Prerequisite: Fren. 112 or departmental consent.
Intensive reading of French literary works of the modern period. Course may be used to meet the LAS literature requirement. Prerequisite: Fren. 112 or equivalent.

227. French Conversation. (1-3). Assignments to increase oral fluency. Emphasizes learning new vocabulary and idiomatic structures. Exercises in the language laboratory. Prerequisite: Fren. 112 or equivalent.

Upper-Division Courses

300. Intermediate French Readings II. (3).
Intensive reading and analysis of French literary works of all periods. Course may be used to meet the LAS literature requirement. Prerequisite: Fren. 223 or equivalent.

Courses for Graduate/Undergraduate Credit

Upper-division courses are given on a rotating basis. Fren. 300 is a prerequisite for all upper-division literature and civilization courses, unless otherwise indicated. All literature courses, including Fren. 223 and 300, may fulfill the general education literature requirement.


515. Major Topics. (1-4). Special studies in (a) language, (b) literature, (c) commercial French, (d) the language laboratory, (e) music, (f) composition, (g) problems in teaching French, (h) civilization, (i) translation, (k) conversation and (m) phonetics. Repeatable for credit. Prerequisite: departmental consent.

525. Advanced Conversation. (3). Designed to increase proficiency in spoken French. Assignments include oral reports, dialogs, and work in the language laboratory. Prerequisite: Fren. 227 and either 220 or 223, or departmental consent.

526. Advanced Composition and Grammar. (3). Emphasizes theme writing, original compositions and detailed study of modern French grammar. Prerequisite: Fren. 220 or departmental consent.

540Q. French Literature in English Translation. (3). Division A course/elective. Topic varies. May be used to satisfy the general education literature requirement and may count toward a French major or minor if readings and papers are done in French.

541Q. French Literature of Africa and the Caribbean in English Translation. (3). Division A course/elective. A study of the concept of Negro art through the works of major contemporary African and Caribbean writers. No knowledge of a foreign language is necessary. Course may count toward a French major or minor if readings and papers are done in French.

551. French Civilization: The Middle Ages to the Restoration. (3). Emphasizes key aspects of the civilization of France as seen in its art, architecture, political structure and history, social evolution and intellectual traditions. Course is interdisciplinary in nature and is designed to complement studies in French language and literature. Includes slide demonstrations, guest speakers on special topics and films. Most classes and required readings are in French. Prerequisite/corequisite: Fren. 300.

552. Contemporary French Civilization. (3). Emphasizes the major events, themes, ideas, trends and movements in French civilization since the Revolution. Course is interdisciplinary in nature and is designed to complement French language and literature courses. Class work and readings are in French. Prerequisite/corequisite: Fren. 300.

623. Seminar in French. (3). Seminar in French literature, language or civilization. Prerequisite: Fren. 300. Repeatable for credit.


631. 17th Century French Literature. (3). Prerequisite: Fren. 300.

632. 18th Century French Literature. (3). Prerequisite: Fren. 300.


634. Contemporary French Literature. (3). Prerequisite: Fren. 300.

635. Introduction to Romance Language Linguistics. (3). Cross-listed as Span. 635 and Ling. 635. An introduction to the historical phonology and morphology of the romance languages emphasizing French and Spanish. Prerequisite: departmental consent.

636. 20th Century French Literature. Reading and discussion of major works of French fiction, poetry and drama from 1900 to 1960. Prerequisite: Fren. 300.

750. Workshop in French. (2-4). Repeatable for credit.

Course for Graduate Students Only

815. Special Studies in French. (3). Prerequisite: departmental consent. Repeatable for credit.

German

Major A. A major in German consists of a minimum of 24 hours beyond the level of Germ. 112. Students may select an emphasis in literature or in language as described below.

The literature emphasis is recommended for students whose concerns are primarily in the humanities or who anticipate graduate study in literature. Students must take Germ. 324, 341 or 441Q, 524, Engl. 315 and at least six hours in Germ. 650.

The language emphasis is suggested for students whose objectives are in teaching (see Major B), linguistics or in the application of language skills in support of other professional pursuits. Students must take Germ. 301, 324, 341 or 441Q, 524 and Engl. 315.

Native speakers of German are not normally permitted to enroll in 100- and 200-level German courses or to receive credit in such courses by advanced standing examination. A minimum of 18 hours in upper-division courses, including Germ. 524 and Engl. 315, is normally required for a native speaker to earn a German major. Native speakers of German should consult with the department before enrolling in German courses.

Major B. The teaching major in German in either Fairmount College of Liberal Arts and Sciences or in the College of Education includes at least 24 hours in the language beyond the 112 level, as discussed earlier under Major A.

In addition to the major, it is recommended that future teachers take courses beyond the general education requirements in other foreign languages, history, art history, English or philosophy.

Students who wish to enter the student teaching program should consult with the department's professor in charge of teacher education early in their college careers. Requirements for entering the student teaching semester include:

1. Grade point average in German of 3.000 or above
2. Special departmental approval based on demonstrated competencies in the use of both oral and written German (not based on course grades)
3. Basic courses in education: required by the Teacher Education Program. (See College of Education.)

Minor. A minor in German consists of 11 hours beyond the 112 level. Students are permitted to count no more than one of the following for minor credit: Germ. 341, 441Q or 641.

Noncredit Course

010. German for Graduate Reading Examination. (3). A reading course; prepares students to fulfill departmental requirements of a reading knowledge of German for the master of arts or master of science. Requires no previous knowledge of German. Course does not count toward a degree. Offered Cr/NCr only.

Lower-Division Courses

101. Beginning German. (3). An introductory course for acquiring practical skill in speaking
and understanding everyday German as well as general information concerning German-speaking countries. Does not substitute for Germ. 111.

102. Beginning German II, (3). A continuation of Germ. 101. For acquiring practical skill in speaking and understanding everyday German as well as general information concerning contemporary German-speaking countries. Does not substitute for Germ. 112. Prerequisite: Germ. 101.

111-112. Elementary German, (5-5). An introductory course emphasizing speaking, reading, writing and grammar essentials. Requires daily classroom and laboratory work.

220Q. Continuing German, (5). Division A course/elective. Grammar review and cultural readings primarily for students meeting the foreign language graduation requirement of Fairmount College of Liberal Arts and Sciences. Recommended for all students with high school German and for transfer students with the college German equivalent to 112.

223. Intermediate German I, (3). Intensive reading and discussion of short works. Prerequisite: Germ. 112 with grade of C or better or departmental recommendation to transfer from Germ. 220Q.

225. German Conversation, (2). The development of oral fluency. Prerequisite: Germ. 220Q or 223. May be taken concurrently with Germ. 223.

Upper-Division Courses

301. German Phonetics and Pronunciation, (3). A practical course to improve pronunciation of individual speech sounds as well as intonation and rhythm of sentences. Prerequisite: Germ. 112 or instructor's consent.

324. Intermediate Conversation and Composition, (2). Emphasizes development of written skills as conversational practice continues. Prerequisite: Germ. 225 or instructor's consent.

341. Civilization of the German-Speaking Countries, (3). Selected topics on significant aspects of life and thought in Germany, Austria and Switzerland. Emphasizes the modern period with special attention to the interrelation of cultural trends. A knowledge of German is not required.

344Q. Intermediate German II, (3). Division A course/elective. Readings in German civilization accompanied by extensive studies of selected literary works. Prerequisite: Germ. 223 or equivalent.

441Q. Culture of Contemporary Germany, (3). Division A course/elective. Study of the culture and life in the Federal Republic of Germany and the German Democratic Republic from 1945 to 1989 and the new unified Germany. A knowledge of German is not required. Does not count toward fulfillment of language requirement.

Courses for Graduate/Undergraduate Credit

524. Advanced Conversation and Composition, (3). Prerequisites: Germ. 324 or instructor's consent.

650. Directed Study, (1-3). Enrollment in any of the areas listed takes place only upon consultation with the department and agreement with the instructor concerned: (a) introduction to the study of German literature; (b) survey I: from the medieval period through the Age of Goethe; (c) survey II: 19th century to 1945; (d) contemporary literature: the literature of both Germanies since 1945; (e) special topics in literature, repeatable once for credit; (f) special topics in language, repeatable once for credit. Prerequisite: Germ. 344Q or instructor's consent.

750. Workshop in German, (2-4). Repeatable once for credit.

Course for Graduate Students Only

815. Special Studies in German, (3). Readings in German literature or culture. May be repeated for credit when the topic changes. Prerequisite: graduate standing or departmental consent.

Greek (Ancient Classical)

There is no major in Greek. A minor consists of 11 hours beyond the 111-112 level.

Lower-Division Course

111. Elementary Greek, (5). Presents the basic grammar of Ancient Classical Greek, and emphasizes early reading.

112. Elementary Greek, (5). Continues the presentation of the basic grammar of Ancient Classical Greek, and emphasizes early reading.

223. Intermediate Greek, (3). Completes the presentation of basic grammar of Ancient Classical Greek, and proceeds to the study of selections from the writings of Plato and Herodotus.

224. Intermediate Greek, (3). Homer's Iliad. Prerequisite: Greek 223.

Courses for Graduate/Undergraduate Credit

515. Special Studies, (1-4). Topic announced by instructor. Repeatable for credit. Prerequisite: Greek 224 or instructor's consent.

531. Advanced Greek, (3). Sophocles and Euripides. Prerequisite: Greek 224.

532. Advanced Greek, (3). Thucydides. Prerequisite: Greek 531.

Italian

There is no major in Italian. A minor in Italian consists of 12 hours beyond the 111-112 level and must include Ital. 515.

Lower-Division Courses

111-112. Elementary Italian, (5-5). Fundamentals of pronunciation and practice in speaking, understanding, reading and writing.

220. Intermediate Italian Grammar and Composition, (3). Prerequisite: Ital. 112 or equivalent.

223-224. Selected Italian Readings, (3-3). Intensive reading of Italian literary works. Features discussions in Italian, as well as oral and written summaries. Prerequisite: Ital. 112 or two units of high school Italian for Ital. 223; Ital. 223 or three high school units for Ital. 224.

225. Intermediate Conversation, (2). Prerequisite: Ital. 112 or departmental consent.

Course for Graduate/Undergraduate Credit

515. Major Topics, (2-4). Special studies in Italian language, literature and civilization. Repeatable for credit. Prerequisite: departmental consent.

Japanese

Lower-Division Courses

111. Elementary Japanese I, (5). An introduction to the Japanese language emphasizing the basic elements of learning the fundamentals of pronunciation, speaking, understanding, reading and writing. Prerequisite: Japanese 111 or an equivalent learning experience.

112. Elementary Japanese II, (5). A continuation of Japanese 111 emphasizing the fundamentals of pronunciation, speaking, understanding, reading and writing. Prerequisite: Japanese 111 or an equivalent learning experience.

220. Intermediate Japanese, (5). Continues development of speaking, reading and writing skills. Prerequisite: Japanese 112 or departmental consent.

Latin

Major A A major in Latin consists of a minimum of 24 hours beyond Latin 112 or its equivalent, and must include at least nine hours of upper-division courses. Courses in Greek, ancient history, Greek philosophy or ancient art are strongly recommended for all majors.

Major B. The teaching major in Latin in either Fairmount College of Liberal Arts and Sciences or in the College of Education includes at least 24 hours beyond Latin 111-112 as listed under Major A, plus the basic courses required by the Teacher Education Program.

In addition to the major, it is recommended that future teachers take courses beyond the general education requirements in other foreign languages, history, art history, English or philosophy.

Students who wish to enter the student teaching program should consult with the department's professor in charge of teacher education early in their college careers. Requirements for entering the student teaching semester are:
1. Grade point average of 3.000 or higher in Latin
2. Special departmental approval based on demonstrated competencies in the use of Latin (not based on course grades)

Minor. A minor in Latin consists of a minimum of 11 hours beyond the 112 level and must include at least one 500 level course.

Lower-Division Courses

150. Workshop in Latin. (2-4). Repeatable for credit.
223. Intermediate Latin. (3). General review of grammar with selected readings of prose and poetry. Prerequisite: Latin 112, two years of high school Latin or departmental consent.
274. Intermediate Latin. (3). Selected readings of prose and poetry. May be repeated for credit when the readings vary. Prerequisite: Latin 223 or departmental consent.

Courses for Graduate/Undergraduate Credit

Latin 224 or departmental consent is the prerequisite for all upper-division courses.

541. Roman Lyric Poetry. (3). The lyric poems of Catullus and Horace emphasizing imagery, symbolism, structure, diction and meter.
542. Vergil's Aeneid. (3). Selected books of the Aeneid in the original and the rest in translation. Studies imagery, symbolism, structure, meter and diction. Gives consideration to the place of the Aeneid in the Augustan Rome and in the epic tradition.
543. Roman Drama. (3). A study of Roman comedy and tragedy, their Greek background and their influence on European literature. Includes selected plays of Plautus, Terence and Seneca, some in the original and some in translation.
545. The Roman Novel. (3). Reading of the Satyricon of Petronius and the Golden Ass of Apuleius. The portions that are not read in Latin are read in English. Gives consideration to the development of the novel from its Greek beginnings up to the time of Apuleius and beyond.
546. Advanced Latin. (3). Directed reading of Latin. Reading may be combined with Latin prose composition at the option of the students. Repeatable for credit when content varies.
652. Cicero. (3). The orations, letters and essays of Cicero. Concentrates on Cicero as the master of Latin prose and as one of the most important political figures of the fall of the Roman Republic.
653. Lucretius and Epicureanism. (3). Reading of Lucretius' De Rerum Natura and study of Epicureanism, the atomic theory and Democritean materialism. Gives consideration to the place of Lucretius in Latin poetry.
750. Workshop in Latin. (2-4). Repeatable for credit.

Portuguese

No major or minor is offered in Portuguese.

Noncredit Course

060. Reading Portuguese. (2). Offered Cr/NCr only. Open to upper-division or graduate students who need to fulfill departmental requirements of a reading knowledge of a foreign language for the master of arts or master of science. No previous knowledge of Portuguese required. Does not count toward a degree.

Russian

There is no major or minor in Russian.

Lower-Division Courses

111. Elementary Russian. (5). A presentation of the sounds and structure of Russian to develop the four basic skills of understanding, speaking, reading and writing.
112. Elementary Russian. (5). A continuation of Russian 111 to complete the presentation of elementary Russian grammar and enhance the four basic skills. Prerequisite: Russian 111 or equivalent.
210. Intermediate Russian. (5). Reading, grammar review and audiovisual presentations in Russian to enhance listening comprehension, speaking, reading and basic writing skills. Prerequisite: Russian 112 or equivalent.
224. Intermediate Russian. (3). A continuation of Russian 210; further enhancement of listening comprehension and speaking, reading and writing skills. Prerequisite: Russian 210 or instructor's consent.
225. Russian Conversation and Composition. (2). Development of oral and written skills. May be taken concurrently with Russian 224. Prerequisite: Russian 112 or instructor's consent.

Upper-Division Courses

300. Intermediate Russian Readings (3). Intensive reading and analysis of Russian literary works of all periods. Prerequisite: Russian 224 or instructor's consent.
315. Special Studies. (1-3). Advanced reading and translation in Russian social sciences, literature and civilization. Repeatable for credit. Prerequisite: departmental consent.
325. Intermediate Russian Conversation and Composition. (2). Continued development of speaking and listening skills, focusing on the vocabulary of everyday Russian life and idiomatic usage. Prerequisite: Russian 224 or 225 or instructor's consent.
340. Russian Literature in English Translation. (3). Consideration of the works of one or two major authors, a literary movement, trend, or specific genre. No knowledge of Russian is necessary, although some is desirable. Repeatable once for credit. Prerequisite: departmental consent.

Spanish

Major. A major in Spanish consists of a minimum of 30 semester hours beyond Span. 111-112. There are three available options for majors. Basic to all three are the following courses: Span. 220, 223, 225, 300, 325, 525 and 526, or equivalents.

Literature. In addition to the above courses, a major emphasizing Hispanic literature requires 12 hours of upper-division literature and/or linguistics.

Language and Civilization. In addition to the basic courses listed above, a major with an emphasis in language and civilization requires 12 hours selected from the following courses: Span. 505, 515 or 622, 552, 557, 626, 627 and 635.

Teaching. The major with teaching emphasis in Spanish in either Fairmount College of Liberal Arts and Sciences or the College of Education consists of at least 30 hours beyond Span. 112 or its equivalent. These hours must include the basic hours listed above plus a minimum of 12 upper-division hours, six of these chosen from the language major and six from the literature major.

In addition to the major, it is recommended that future teachers take courses beyond the general education requirements in other foreign languages, history, art history, English or philosophy.

Students who wish to enter the student teaching program must have a 3.000 grade point average in Spanish and departmental approval based on demonstrated proficiency in the use of both oral and written Spanish in order to be admitted to the professional semester. It is strongly recommended that teaching majors take Span. 505 and/or 623. Spanish majors seeking teacher certification must also complete the basic courses required by the Teacher Education Program (see College of Education.)

Majors interested in teaching Spanish at the elementary school level should consult the department's professor in charge of teacher education.

Minor. A minor in Spanish consists of a minimum of 11 hours beyond the Span. 111-112 level and must include Span. 220, 223, 225 and one course at the 500 level or above.
**Lower-Division Courses**

111-112. **Elementary Spanish.** (5-5). Emphasizes the four fundamental skills in language learning: understanding, speaking, reading, and writing.

150. **Workshop in Spanish.** (2-4). Repeatable for credit.

210Q. **Intermediate Spanish.** (5). Division A course/elective. Continues the four fundamental skills in language learning: understanding, speaking, reading and writing. Emphasizes conversation and cultural readings. Not open to students with previous credit in Span. 221 (no longer offered). Prerequisite: Span. 112, two units of high school Spanish or departmental consent.

215. **Intermediate Spanish II.** (5). Intensive review of Spanish; special emphasis on conversation. Course offered only in Puebla, Mexico. Prerequisite: Span. 112, two units of high school Spanish or departmental consent.

220. **Intermediate Spanish Grammar and Composition.** (3). Prerequisite: Span. 210Q or three units of high school Spanish or departmental consent.

223. **Selected Spanish Readings.** (3). Intensive reading of Latin-American and Spanish literary works. Also includes outside readings and reports. Course may be used to meet the LAS literature requirement. Prerequisite: Span. 210Q or three units of high school Spanish or departmental consent.

225. **Spanish Conversation I.** (2). Prerequisite: Span. 210Q or three units of high school Spanish or departmental consent. Should be taken with Span. 220.

281. **Cooperative Education.** (1-4). Provides the student with a field placement which integrates theory with a planned and supervised professional experience designed to complement and enhance the student’s academic program. Individualized programs must be formulated in consultation with and approved by appropriate faculty sponsors. May be repeated. Prerequisite: Span. 223. Offered CR/NC only.

**Upper-Division Courses**

300. **Intermediate Spanish Readings.** (3). Intensive reading and analysis of Spanish literary works of all periods. Course may be used to meet the LAS literature requirement. Prerequisite: Span. 223 or departmental consent.

325. **Spanish Conversation II.** (2). Continuation of Span. 225 with continued emphasis on fluency in Spanish and on vocabulary building. Prerequisite: Span. 225 or departmental consent.

481. **Cooperative Education.** (1-4). See Span. 281.

**Courses for Graduate/Undergraduate Credit**

Upper-division courses are given on a rotating basis. Span. 300 is a prerequisite for all upper-division literature and civilization courses, unless otherwise indicated. All literature courses, including Span. 223 and 300, may fulfill the general education literature requirement.

505. **Spanish Phonetics.** (2). Cross-listed as Ling. 505. Prerequisite: any 200-level course or departmental consent.

515. **Major Topics.** (1-4). Special studies in (a) language, (b) literary reports, (c) commercial Spanish, (d) the language laboratory, (e) music, (f) composition, (g) problems in teaching Spanish, (h) advanced conversation. Repeatable for credit. Prerequisite: departmental consent.

525. **Spanish Conversation III.** (2). Prerequisite: Span. 325 or departmental consent.

526. **Advanced Grammar and Composition.** (3). Prerequisite: Span. 220 or departmental consent.

531. **Survey of Spanish Literature.** (3). Main currents of Spanish literature from 1700 to the present. Prerequisite: Span. 300 or departmental consent.

532. **Survey of Spanish Literature.** (3). Spanish literature from the beginning to 1700. Prerequisite: Span. 300 or departmental consent.

534. **Contemporary Spanish Theater.** (3). Prerequisite: Span. 300 or departmental consent.

536. **Contemporary Spanish Novel.** (3). Prerequisite: Span. 300 or departmental consent.

540Q. **Contemporary Spanish Literature in English Translation.** (3). Division A course/elective. Content may vary from semester to semester, including Spanish and/or Latin-American literature. No knowledge of a foreign language is necessary. Course may count towards a Spanish major or minor with departmental consent if reading is done in Spanish and prerequisite of Span. 300 is met. Repeatable for credit. Prerequisite: departmental consent when counted toward a Spanish major or minor.

552. **Business Spanish.** (3). Provides the opportunity to learn and practice commercial correspondence, business vocabulary, translation and interpretation of business texts. Prerequisite: Span. 526.

557. **Literary and Technical Translating.** (3). Extensive translation of literary works and technical and legal documents from Spanish to English and English to Spanish. Prerequisite: Span. 526 or departmental consent.

620. **Survey of Latin-American Literature.** (3). Main currents of Latin-American literature from 1500 to 1600. Prerequisite: Span. 300 or departmental consent.

621. **Survey of Latin-American Literature.** (3). Main currents of Latin American literature from 1800 to present. Prerequisite: Span. 300 or departmental consent.

622. **Special Studies.** (1-4). Topic for study chosen with aid of instructor. Repeatable for credit. Prerequisite: instructor’s consent.

623. **Seminar in Spanish.** (1-5). Special studies in (a) language, (b) Spanish and Latin-American literature, (c) Spanish and Latin-American culture and civilization, and (d) methods of teaching Spanish in the elementary and secondary schools. Repeatable for credit. Prerequisite: departmental consent.

625. **Contemporary Latin-American Novel.** (3). Prerequisite: Span. 300 or departmental consent.

626. **Spanish Civilization.** (3). Intensive study of Spanish culture, including historical and geographical factors in its development and its contributions to world civilization. Prerequisite or corequisite: Span. 300 or departmental consent.

627. **Latin-American Civilization.** (3). Intensive study of Latin-American culture, including the historical and geographical factors in its development and its contributions to world civilization. Prerequisite or corequisite: Span. 300 or departmental consent.

628. **Contemporary Latin-American Theater.** (3). A study of contemporary theater from 1900 to present. Prerequisite: Span. 300 or departmental consent.

631. **Latin-American Short Story.** (3). Study of the main writers in contemporary Latin-American literature. Prerequisite: Span. 300 or departmental consent.

635. **Introduction to Romance Linguistics.** (3). Cross-listed as Fren. 635 and Ling. 635. An introduction primarily to the historical phonology and morphology of the romance languages, emphasizing French and Spanish. Prerequisite: departmental consent.

728. **Theory and Practice for University Teaching.** (2). Deals with recent theories of language acquisition and their application to the teaching of Spanish. Required for teaching
Assistant: **Courses for Graduate Students Only**


826. Grammar and Stylistics. (3). Intensive study of advanced grammar and stylistic usage.

831. Seminar in Spanish Literature. (3). (a) Middle Ages, (b) Renaissance, (c) Golden Age; (d) Cervantes; (e) modern novel; (f) Generation of ’98; (g) contemporary novel; (h) 20th century theater; (i) Spanish romanticism; (j) 20th-century poetry and (m) literary criticism.

832. Seminar in Latin-American Literature. (3). (a) colonial period, (b) contemporary novel, (c) short story, (d) poetry, (e) modernism, (f) essay and (i) theater.

**Philosophy**

The study of philosophy is relevant to all aspects of life and can be pursued fruitfully at many levels. Philosophical thought may direct itself to such diverse topics as the nature of reality, the conditions of knowledge, the justifications for political authority, the reality of subatomic particles, the existence of God, the criteria of aesthetic evaluation, the structure of logical reasoning and the foundations (if any) of morality. Because of the breadth of the philosophical enterprise, the study of philosophy can be approached from many directions and need not involve a hierarchy of prerequisites. Philosophy majors pursue many careers—teaching, law, medicine, city management and sales. The philosophy department reflects the breadth and diversity of the philosophical enterprise and offers a wide variety of courses.

**Minor.** A minor consists of 15 hours of philosophy courses, selected in consultation with a departmental adviser, that orient students to the philosophic aspects of their major fields.

**Lower-Division Courses**

10QC. The Meaning of Philosophy. (3). Division A course/elective. An exploration of the meaning of philosophically. Through an examination of some fundamental problems and possible solutions, develops a broad understanding of the nature of philosophical thought. Considerable class time is devoted to the discussion of the fundamental problems and possible solutions. Special attention is given to the personal, moral and social issues of contemporary moral issues and their relation to the personal, moral and social issues of the individual. No prerequisites.

125Q. Introductory Logic. (3). Division A course/elective. Deals with the uses of logical concepts and techniques in evaluating and criticizing arguments. Studies some elementary systems of formal logic. Considerable class time is devoted to the discussion of systems of formal logic. Discusses a number of systems of formal logic and emphasizes the analysis and evaluation of arguments found in such diverse fields as law, politics, education, advertising and religion.

129. University Experience. (3). An examination of the structure and process of the university experience. Includes an analysis of the personal, moral and spiritual problems and opportunities presented by the university experience. Provides clarification and guidance in understanding the university and in choosing one’s future.

144Q. Moral Issues. (3). Division A course/elective. An introduction to philosophical thought about ethics. Discusses a number of contemporary moral issues and considers various philosophical approaches to their solutions.

**Upper-Division Courses**

300G. Science and the Modern World. (3). Division A course/elective. Develops an understanding of the methods and accomplishments of science and how these have affected the way people understand themselves, society and the universe. The approach is both historical, with respect to the creation of the prescientific world view and the development of science and, analytic with respect to understanding the goals, methods and limits of contemporary science. No prerequisites but prior completion of general education requirements in science is desirable.

301. Language and Philosophy. (3). Cross-listed as Ling. 301. Examines the relationships between philosophy and language. Focuses on questions such as: What is the relation between language and thought? Language and the world? What can the study of language contribute to the resolution of philosophical problems?

303Q. Nineteenth Century Philosophy. (3). Division A course/elective. A study of selected 19th century philosophers or systems such as Fichte, Schelling, Hegel, Schopenhauer, Marx, Mill, Bradley, Kierkegaard, Peirce, Nietzsche, Comte, Dilthey, Schleiermacher, idealism, materialism, positivism, empiricism and pragmatism.

308. Philosophy of Economics. (3). Investigates various philosophical issues inherent in economic theory and decision making. Philosophical problems discussed include concepts of rationality, decision theory economic freedom, economic justice, morality and markets and the methodology and presuppositions of economic inquiry.

311Q. Philosophy of Law. (3). Division A course/elective. An introduction to philosophical problems arising in the theory and practice of law. Includes the objective basis of legal systems, the relationship between morality and legality, the justifications of civil disobedience, the limits of legal constraints on the individual and the nature of justification of punishment. Attention to classical and contemporary readings.

313Q. Political Philosophy. (3). Division A course/elective. An examination of various philosophical issues concerning political systems. Discusses issues such as the nature of political authority, the rights of individuals, constitutionalism and civil disobedience.

315. Late Modern Philosophy. (3). A study of philosophical thought in the 18th century with selections from philosophers such as Berkeley, Hume, Reid, Adam Smith, Butler, Hutcheson, Wolff, and Kant, and movements such as empiricism, rationalism, the Scottish common sense school and idealism.

320. Philosophy of Science. (3). A study of the methods, goals and world views of the sciences with attention to such topics as the structure and evaluation of scientific theories, the nature of scientific explanations, the dynamics of scientific revolutions and the impact of science on human society and values.

322Q. Early Modern Philosophy. (3). Division A course/elective. A study of philosophical thought in the period from the Renaissance through the 17th century with selections from philosophers such as Pico, Vico, Galileo, Cusanus, Telesio, Erasmus, More, Hobbes, Bacon, Machiavelli, Descartes, Spinoza, Leibniz, Malebranche and Locke.

325. Formal Logic. (3). Cross-listed as Ling. 325. A study of systems of formal logic including sentential and predicate logic. Emphasizes the understanding of these systems in the analysis of arguments.

327. Philosophy of Education (3). An examination of the philosophical and ethical issues generated by the development and expansion of the health care professions. Examines topics such as the concept of health, rights of patients, the medical team, professional rights and responsibilities, behavior control, euthanasia and institutional care. For the layperson as well as the medical professional.
331Q. Ancient Greek Philosophy. (3). Division A course/elective. An examination of the development of Greek philosophy in its major phases, including an exploration of the Milesian and Eleatic traditions, Pythagoras, the Atomists, the Pluralists, the Sophists, Socrates, Plato and Aristotle.

338. Philosophy of Feminism. (3). Cross-listed as Wom. S. 338. An exploration of philosophical issues raised by the feminist movement emphasizing conceptual and ethical questions.

340. Empiricism. (3). A study of the development of empiricism in philosophy, including the work of figures such as Hume, Berkeley, and Mill.

348. Philosophy of the Arts. (3). An intensive examination of one or more fundamental problems or themes in the philosophy of art or in the special aesthetics of painting, music, sculpture, literature, drama, movies, etc. Includes the problem of beauty, the character of the aesthetic attitude, the function of the arts, the legitimacy of general art theory, the presuppositions of specialized art theory, the creative act, art and truth, art and life and the nature and function of art criticism.

400. Honors Seminar. (3). Cross-listed as Hrs. 400. An honors course on a special topic, to be announced. Repeatable for credit up to six hours. Prerequisite: honors student or departmental consent.

Courses for Graduate/Undergraduate Credit

518. Recent British-American Philosophy. (3). Examination of philosophical ideas and movements in recent British-American philosophy. Discusses movements such as logical positivism, pragmatism, ordinary language philosophy and analytic philosophy. Readings are selected from figures such as Russell, Wittgenstein, Pierce, Dewey and Quine.


540. Theory of Knowledge. (3). A critical examination of the nature of knowledge and of the philosophical problems concerning skepticism, knowledge of the self, material objects, other minds, the past, present and future, universals, and necessary truths. Includes selections from both historical and recent writings. Prerequisite: one course in philosophy.

549. Topics in Ancient Philosophy. (3). Explores one decisive issue in philosophy from the time of Thales through the Stoics. The examination of an issue may confine itself to one period within the total span of ancient philosophy or it may trace the issue throughout the span, indicating its contemporary treatment. Some of the issues treated are: the nature of what is, the concept of the sacred, the meaning of truth, the relation of invariance and process, the existence of universal standards of thought and conduct, the problem of knowledge, skepticism, the nature of language and the character of philosophical inquiry.

550. Metaphysics. (3). An exploration of some basic topics in the theory of reality. Includes such notions as space, time, substance, causality, particulars, universals, appearance, essence and being. Prerequisite: one course in philosophy.

555. Philosophy of the Social Sciences. (3). Studies such topics as the relations of social science with natural science and philosophy, methodological problems peculiar to social science, the nature of sound explanation concepts and constructs and the roles of mathematics and formal theories in social science.

557. Contemporary European Philosophy. (3). An exploration of a theme, issue, philosopher or movement in contemporary European philosophy. Includes such philosophers as Husserl, Heidegger, Jaspers, Gadamer, Habermas, Marcuse, Adorno, Bergson, Sartre, Merleau-Ponty, Bachelard, Lacan, Derrida, Foucault and Ricoeur. Examines philosophical movements such as phenomenology, idealism, existentialism, structuralism, process philosophy, hermeneutics and Marxism.

585. Studies in a Major Philosopher. (3). A concentrated study of the thought of one major philosopher announced by the instructor when the course is scheduled. Repeatable for credit. Prerequisite: instructor's consent.

590. Special Studies. (3). Topic for study announced by instructor. Repeatable for credit. Prerequisite: instructor's consent.

674. Artificial Intelligence and Philosophy. (3). Cross-listed as CS 674. Transfer of ideas between artificial intelligence and philosophy, concepts and techniques of artificial intelligence and their application in philosophy (search, heuristic, problem solving, knowledge representation, learning, discovering); sources of insight for artificial intelligence in different branches of philosophy. The analogy between minds and computers "cognition is a computation and the mind is a computer," is contrasted with "there are mental features not accessible to computation." Discusses the relevance of God's theorem and other results in the domain of computability in this context. Prerequisites: at least one 300-level course in computer science or philosophy, Math. 243 and five hours toward the major in any one of the physical or biological sciences with grades of C or better or departmental consent.

699. Directed Reading. (2-3). For the student interested in doing independent study and research in a special area of interest. Repeatable for credit. Prerequisite: departmental consent.

Courses for Graduate Students Only

805. Business and Morality. (3). Critically examines moral issues particularly germane to business. Includes theories of distributive justice, theories of property rights, the role of business as a social institution, employment rights and obligations, environmental issues and theories of socially responsible investment practices. Readings from classical and contemporary authors.

850. Directed Reading. (3). For the graduate student desiring independent study and research in an area of special interest. May be repeated for credit. Prerequisite: departmental consent.

Physics

The Department of Physics offers a flexible and challenging undergraduate program of study leading to the Bachelor of Arts (BA) degree or the Bachelor of Science (BS) degree and a graduate program leading to the Master of Science (MS) degree.

The curriculum of the department includes the traditional core physics courses and also provides the opportunity for the student to explore areas of individual interest through special projects.

Major. The following courses are required for a physics major: Phys. 213Q-214Q or 313Q-314Q-315Q-316Q, 551, 611, 621 and 631-632; Math. 550 and 545, 547 or 651; and five hours of chemistry.

For the Bachelor of Arts (BA) degree, two hours of Phys. 516 or 517 are required. Six additional hours of upper-division physics also are required.

For the Bachelor of Science (BS) degree, four hours of Phys. 516, two hours of Phys. 517, eight additional hours of upper-division physics and five additional hours of chemistry are required. Ten hours of a foreign language also are required for the BS.

Chemical Physics Option. A student majoring in physics may select a chemical physics option. This option consists of the BS or BA requirements in physics, with Phys. 642 chosen as an elective, plus six...
hours of chemistry beyond the 111-112 sequence, to be chosen from Chem. 545, 546, 641 or 741.

Other Options. Other programs are available which provide the student an opportunity to combine the study of physics with an interest in another area. On an individual basis, students have included interests in astronomy, engineering, geology, computer science, biological sciences and education.

Minor. A minor in physics consists of Phys. 213Q-214Q or 313Q-314Q-316Q and at least six additional hours of upper-division physics.

Lower-Division Courses

111Q. Introductory Physics. (4). 3R; 3L. Division C course/elective. A general physics course for liberal arts students and those who have not had physics in high school. Includes mechanics, heat, electricity and magnetism, wave phenomena and modern physics. Not open to students who can meet prerequisites for Phys. 313Q. Prerequisite: two years of high school algebra or one each of algebra and geometry or equivalent.

131. Physics for the Health Sciences. (3). A background in basic physics for students in health related professions. The choice of topics, the emphasis on problems and the detailed applications are directed toward the special uses of physics in the health sciences. Prerequisites: two years of high school algebra or one each of algebra and geometry or equivalent.

195G. Introduction to Modern Astronomy. (3). Division C course/elective. A survey of physics for the student with little or no background in science or math. The nature and evolution of the universe and objects in it are considered from the perspective of the question: Why do things happen the way they do? May include comparison of the planets, stars and black holes, galaxies and quasars and the expansion of the universe.

196. Laboratory in Modern Astronomy. (1). 3L. The application of the techniques and analysis of the data of modern astronomy. For the student with some background in the physical sciences. When 196 is completed, 195G and 196 count as a laboratory science. Requires field trips. Prerequisites: two semesters of high school algebra or the equivalent, or instructor's consent, and Phys. 195G, which may be taken concurrently.

198. Discovery in Astronomy. (3). Discusses a selected topic in astronomy to develop an understanding of the discoveries and problems of modern astronomy. Primarily for general students with little or no background in a science or math. See course schedule for topic each semester.

213Q. General College Physics I. (5). 4R; 3L. Division C course/elective. Mechanics, heat and wave motion. For students with a working knowledge of algebra and trigonometry but who have had no calculus. Prerequisite: high school trigonometry or Math. 112.

214Q. General College Physics II. (5). 4R; 3L. Division C course/elective. A continuation of Phys. 213Q. Electricity, light and modern physics. Prerequisite: Phys. 213Q or 313Q.

223. The Mechanical Universe. (4). A study of the development of mechanics with calculus. The mechanics is applied to planetary motion, harmonic motion and waves as embodied in the specially prepared TV course "The Mechanical Universe." Not a lab course but lab credit can be obtained by departmental arrangement. Prerequisite: high school trigonometry or Math. 112.

Upper-Division Courses

313Q. University Physics I. (4). Division C course/elective. The first semester of a calculus-based physics sequence. Studies mechanics, heat and wave motion. High school physics is recommended as preparation for this course. Natural science majors are required to take the lab Phys. 315Q that accompanies this course. Credit is not given for both Phys. 213Q and 313Q. Corequisite: Math. 243.

314Q. University Physics II. (4). Division C course/elective. The second semester of a calculus-based physics sequence. Studies electricity, magnetism and light. Natural science majors are required to take the lab Phys. 315Q that accompanies this course. Credit is not given for both Phys. 214Q and 314Q. Prerequisites: Math. 243 with a grade of C or better and Phys. 213Q with a grade of B or better or Phys. 313Q.


395G. Solar System Astronomy. (3). Division C course/elective. Studies the sun, major planets and minor bodies of the solar system, particularly their nature and origin. Discusses classical ground-based observations and the results of satellite investigations. Primarily for students with little prior contact with science.

400. Individual Readings in Physics. (1-2). Repeatable but total credit may not exceed two hours for physics majors. Prerequisite: departmental consent.

481. Cooperative Education in Physics. (1-4). Complements and enhances the student's academic program by providing an opportunity to apply knowledge gained through course work to job-related situations. No more than four hours earned in Phys. 481 may be applied toward satisfying the requirements for a major in physics. Offered CR/NC only. Prerequisite: departmental consent.

Courses for Graduate/Undergraduate Credit

501. Special Studies in Physics for Educators. (1). 3L. A series of courses covering basic physical concepts which provide physical science background for the elementary educator. Prerequisite: in-service elementary teacher.

516. Advanced Physics Laboratory. (2). 4L. Experiments in classical and modern physics to stress scientific methods and experimental techniques. The experiments are open ended and projects requiring individual study. Repeatable up to a maximum of eight credit hours. Corequisite: Phys. 551.

517. Electronics Laboratory. (2) 1R; 3L. Experiments in electronics that treat some of the applications of electronics in scientific research. Experiments cover the use of vacuum tubes, transistors, IC and digital circuits. Prerequisite: Phys. 314Q.

551. Topics in Modern Physics. (3). An introduction to selected areas of modern physics emphasizing the features of atomic nuclear and solid state physics that require modifications of classical physics for their explanation. Prerequisite: Phys. 214Q or 314Q or departmental consent. Corequisite: Math. 344.

555. Physical Optics. (3). Electromagnetic waves, diffraction and interference. May include geometrical optics, coherence, radiation, scattering and optical properties of solids. Prerequisites: Phys. 214Q or 314Q and Math. 344.

590. Stellar Astrophysics. (3). Focuses on the application of basic physical principles to the study of stars. Includes stellar atmospheres, the structure of stars, formation and evolution of stars, nuclear reactions and nucleosynthesis, unusual stars, the death of stars and the interstellar medium. Prerequisite: Phys. 551.

595. Galactic and Extragalactic Astronomy. (3). Primary topics are galaxies and the structure of the universe. Includes the constituents and dynamics of our galaxy, the characteristics of normal galaxies, active galaxies and quasars, and cosmology. Prerequisite: Phys. 551.

601. Individual Readings in Astrophysics. (1-2). Studies several topics in astronomy and astrophysics in depth. Lectures, independent readings and student projects may be assigned. May be repeated up to six hours. Prerequisites: Phys. 590 or 595 or instructor's consent.

611. Modern Physics I. (3). Introduction to quantum mechanics, the Schroedinger equation, elementary perturbation theory and the hydrogen atom. Prerequisite: Phys. 551.


621. Elementary Mechanics I. (3). Motion of a particle in one and several dimensions, central forces, the harmonic oscillator and the Lagrangian formulation of mechanics. Prerequisites: Phys. 214Q or 314Q and Math. 344 with grades of C or better.
531. Electricity and Magnetism I. (3). Direct and alternating currents; electric and magnetic field theory, including an introduction to Maxwell's electromagnetic wave theory. Prerequisites: Phys. 214Q or 314Q and Math. 344 with grades of C or better.

532. Electricity and Magnetism II. (3). A continuation of Phys. 631. Prerequisite: Phys. 631 or instructor's consent.


Coursed for Graduate Students Only

801. Individual Readings. (1-3). Repeatable for credit up to three hours. Prerequisites: 30 hours of physics and departmental consent.

802. Selected Topics in Physics. (2-3). Repeatable for credit up to six hours. Prerequisite: departmental consent.

807. Seminar. (1). Review of current periodicals; reports on student and faculty research. Repeatable for credit up to two hours. Prerequisite: 20 hours of physics.

809. Research. (1-3). Repeatable for credit up to six hours.

811. Quantum Mechanics I. (3). The Schroedinger and Heisenberg formulations of quantum mechanics. Applications include rectangular potentials, central forces and the harmonic oscillator. Also include spin, time independent and time dependent perturbation theory. Prerequisites: Phys. 621 and 611 or departmental consent and Math. 550.

812. Quantum Mechanics II. (3). Applications of quantum mechanics including the WKB approximation, scattering, transformation theory, interaction picture, molecules and relativistic quantum mechanics. Prerequisite: Phys. 611.

813. Quantum Mechanics III. (3). Applications of quantum mechanics including the N-body problem, second quantization, photons, the electromagnetic field, superconductivity and magnetism. Prerequisite: Phys. 811.


881. Solid State Physics I. (3). The basic knowledge of the nature and properties of the solid state, including the structural, thermal, mechanical, electrical and magnetic properties. Also studies the electron theory of metals and band theory of solids. Prerequisites: Phys. 551 or departmental consent and Math. 550.


Political Science

Politics—a means of managing conflict and distributing the materials of society its members—affects everyone because everyone lives in society and conflict exists in every society. This fact led the Greek philosopher Aristotle to observe centuries ago that “man by nature is a political animal.” While contemporary political scientists approach the study of politics in a variety of ways, all agree that politics is a central characteristic of human activity.

Political science students at The Wichita State University take courses in at least four of five subject areas: (1) American politics and institutions; (2) comparative politics; (3) international politics; (4) political theory and philosophy and (5) public administration. Most political science majors supplement their curriculum by taking elective hours in the humanities—history, philosophy and literature, for example—and in other social sciences, such as economics, anthropology, sociology and psychology. The department also recommends that students take courses in statistics and computer applications.

Students with political science degrees may become practicing politicians or they may pursue careers in public administration, government service, law, journalism, business or teaching at the secondary or college level.

The political science degree program at Wichita State is designed to accommodate these career interests as well as others. The requirements for the major are flexible enough to permit students to concentrate in one or two areas.

Major. A major consists of Pol. S. 121Q and 30 additional hours, including at least one course in four of the five groups below.

Group 1, Political Theory and Philosophy—Pol. S. 345, 444 or 547

Group 2, American Politics—Pol. S. 315, 316Q, 317, 318, 319, 358Q, 551 or 552Q

Group 3, Comparative Politics—Pol. S. 320, 330, 523Q, 524 or 525

Group 4, International Politics—Pol. S. 335Q, 336, 338 or 534

Group 5, Public Policy and Administration—Pol. S. 321, 505, 506, 533, 564, 580 or 587

Related Fields. Because of the changing nature of the social sciences and because of their increasing applicability in both the public and private sectors, political science majors should take appropriate courses in other social sciences, particularly Econ. 201-202Q, statistics and computer science.

Public Administration Option in Political Science. The goal of the public administration option is to prepare students for future entrance into public service. The option meets several needs. Many students in the social sciences plan for careers in the public sector, and there is evidence that public agency heads are demanding more and better qualified students with undergraduate degrees to face the challenges of the future in public service. Although the option emphasizes the preparation of undergraduates for public service, those who plan to enter graduate school in the fields of administration and public policy also will be prepared to undertake a more professional course of study.

A major with a public administration option consists of 36 hours, including Pol. S. 121Q, 345, 444 or 547; one course from Group 3 (Comparative Politics) or Group 4 (International Politics); and the required hours from each area below.

Urban Government Finance
Area B (nine hours)—Pol. S. 321, Introduction to Public Administration, and two of the following: Pol. S. 564, Comparative Public Administration; Pol. S. 580, Administration and the Policy-Making Process; or Pol. S. 587, Theory of Administration
Area C (six hours)—Econ. 201Q, Principles of Economics I, and three hours in any of the following: Soc. 501, Sociological Statistics; Econ. 231, Introductory Business Statistics; Math. (Statistics) 360Q, Elementary Probability; Psy. 316, Industrial Psychology; or computer science.

Lower-Division Courses

101G. Politics: Who Gets What. (3). Division B course/elective. Focuses on some of the great political ideas and applied them to modern issues. Even if there are no eternal truths, there are eternal problems. Major ideas include: the rulers and the ruled, liberty versus order, the right of dissent, political obligation and issues of conscience. Also, current policies developed cover sex in politics, First Amendment freedoms, ethnic politics and the politics of oil.

103G. Games Nations Play: Problems in International Relations. (3). Division B course/elective. Course's immediate and most apparent aim is to familiarize students with a number of international problems. The intention, however, is to achieve more general and long-lasting aims rather than to transmit facts. The dual aims thus become the development of a sensitivity on the part of students to international problems that will be a part of their lives and to create a framework in which the students can analyze the international problems they encounter in the future.

121Q. American Politics. (3). Division B course/elective. An analysis of the basic patterns and structure of the American political system emphasizing policies and problems of American politics.

150. Political Science Workshop. (1-3). Prerequisite: instructor's consent.


222. East Asia. (3). Cross-listed as Hist. 222, Rel. 222Q and LAS-I 222Q. A survey of basic topics on China, Korea and Japan, including history, culture, society, politics, religion, politics and economics. Taught by a team of instructors from several departments.

225Q. Comparative Politics. (3). Division B course/elective. An analysis of the basic patterns and structures of Western democratic and political systems, transitional systems and didactic or totalitarian systems.

232Q. Basic Ideas in Political Theory. (3). Division B course/elective. Shows the direct relationship between political philosophy and practical political structures and policies. Examines the political philosophies of six important Western philosophers at an introductory level. Studies different models of democracy in order to demonstrate the relationship between a set of basic philosophical assumptions and the political society that appears appropriate to that set of assumptions. Examines one or more major political issues to illustrate the various kinds of solutions that may be suggested by different political philosophies.

Upper-Division Courses

315. The Presidency. (3). Focuses upon the evolution of the presidential office, the recruitment of presidents and the nature of presidential power.

316G. The Congress. (3). Division B course/elective. Focuses on the Congress with particular attention to interest articulation at both state and national levels.

317. Urban Politics. (3). An analysis of politics in urban areas, including the nature and distribution of community power, influence and leadership, the nature of community conflict, the formation of policy, urban problems and political solutions and trends in urban policies.

318. Political Parties. (3). The role of political parties in the American political decision-making process at the national, state and local levels.

319. State Government. (3). Examines the role of the states in the federal system and compares state politics and their political institutions.

320. Politics of Developing Areas. (3). A survey of the political systems in Latin America, Africa, the Middle East and south and southeastern Asia. Special attention to colonialism as a system, the effects of colonialism and patterns of emerging nations.

321. Introduction to Public Administration. (3). A general survey of the scope and nature of public administration; administrative regulations and adjudication; organization and management; budgeting and fiscal management; public personnel administration; political, judicial and other controls over the administration.

325. Soviet Politics and Government. (3). An in-depth look at the Soviet political system. Using the United States as a point of reference, course compares political processes in the systems of the two superpowers. Includes political ideas and politics; the political system and the individual; including treatment of political dissidents and topics of terror; lives of the elites and the masses; evolution and development of the Communist party of the Soviet Union; leadership selection; treatment of minorities; judicial systems; and problems and policies.

335Q & 336. International Politics and Institutions. (3 & 3). 335Q: Division B course/elective. Examines the use of force and intervention in the international system. Covers the use of diplomatic and military surprise and crisis and the nature of war. Also discusses problems involved in comparing arms levels between Soviet and Western coalitions and in transferring arms to Third World countries.

337. International Force and Intervention. (3). Examines the use of force and intervention in the international system. Covers the use of diplomatic and military surprise and crisis and the nature of war. Also discusses problems involved in comparing arms levels between Soviet and Western coalitions and in transferring arms to Third World countries.

338. Soviet Foreign Policy. (3). The concept, content and control of Soviet foreign relations; instruments and tools of Soviet diplomacy; strategy and tactics; change and continuity from Russia to Soviet foreign relations and policy aims; and execution of foreign policy in selected areas.

345. Classical Medieval Political Theory. (3). Examines the beginnings of Western political philosophy through works of Plato and Aristotle. This original body of political ideas dominated the Western world for more than 2,000 years. Traces the changes in emphasis that occurred in this tradition through the Roman Stoics and the religious philosophers of the Middle Ages. Familiarity with these early political ideas is a major contribution to understanding subsequent political philosophies.


356Q. American Political Thought. (3). Division B course/elective. Considers selected topics in the development of political ideas in the United States.

390. Special Topics in Political Science. (1-3). An analysis of selected titles in political science in a seminar setting. Content varies depending upon the instructor. Repeatable for credit.

498. Directed Readings. (1-3). For exceptional students to meet their needs and deficiencies. Repeatable for credit. Prerequisites: senior standing and departmental consent.

444. Modern Political Theory. (3). Continues the study of Western political philosophy beginning with the decisive break with the classical tradition made by Machiavelli early in the 16th century. Studies major philosophers Hobbes, Locke and Rousseau, as well as political philosophers of the social contract who exercised a great influence on the creation of the American political system. Also studies Marx, a political thinker who moves strongly in the direction of 20th century political philosophy. Philosophers of this period have collectively had a profound impact on political life in this century.

481. Cooperative Education in Political Science. (1-3). Provides practical experience to complement the student's major in political science curriculum. Student programs must be approved by the department. Offered Cr/N Crony.
Courses for Graduate/Undergraduate Credit

505. The Politics of Health. (3). Cross-listed as HAE 505. Shows how governments in the United States make decisions in the health field, describes the political forces shaping governmental policy in health and analyzes the arguments for and against an increased governmental role in health.

506. Politics of Aging. (3). Cross-listed as Geron. 506. Focuses on the role of the elderly as competitors in the political arena. In assessing the elderly’s strengths and weaknesses, course analyzes the effects of aging on political behavior, strategies of the aging—both individual and collective—and the responses of the political system.

523Q. Government and Politics of Latin America. (3). Division B course/elective. An examination of the political institutions and processes that currently exist in the Latin American republics. Emphasizes the social, economic and psychocultural factors affecting these institutions and processes.

524. Politics of Modern China. (3). Emphasizes study of China’s political system since 1949 in terms of non-Western goals and ideas of social organization. Uses themes of political integration and political development to minimize distortion or cultural bias. Examines the roots of the political system, the system as it is now and the goals China is striving to realize. Some assessment about the future development of communism in China. Includes Chinese communism and the ideological heritage; political culture; political leadership; leadership succession; political participation; the Chinese Communistic Party; political communications and socialization; legal developments; policy choices; and major events, such as the Hundred Flowers Campaign, Great Leap Forward and the Proletarian Cultural Revolution.


534. Problems in Foreign Policy. (3). Examines domestic and international problems associated with U.S. foreign policy.

573. Contemporary Political Theory. (3). Introduces the radically new ideas that emerged in the last century as a result of Darwin’s theory of evolution, the doctrine of historicism and the growth of modern science and explores their impact upon political thought. Although the multiplicity of philosophies makes generalization difficult, most of them draw strength from common sources. Studies philosophers such as Hans Kelsen, William Barrett, Frederick Nietzsche and John Dewey. Gives attention to the importance of these new philosophies upon political structures and issues.

550. Public Law. (3). An analysis of the role of appellate courts—especially of the U.S. Supreme Court—in the American political system. Emphasizes judicial review of state and federal legislation, the separation of powers, federalism, the taxing power and the commerce clause.

552Q. Civil Liberties. (3). Division B course/elective. An analysis of the role of the appellate courts—especially of the U.S. Supreme Court—in the American political system. Emphasizes the guarantees of the Bill of Rights and the 14th Amendment.

560. The Planning Process. (3). For students desiring to work in an urban planning agency or who will be involved in planning issues as an administrator at the city, county, state or federal level. Also for students seeking an understanding of the complex process of urban-related life. Examines the role of planning in solving human and environmental problems. Emphasizes the relationship between specialists, citizens and elective officials as participants in the planning process.

561. Public Management of Human Resources. (3). Surveys the major areas of management of human resources in the public sector. Includes hiring, training, evaluation and pay promotion policies. Special emphasis on the laws governing public personnel management and on the unique merit, equal employment opportunity, productivity, unionization and collective bargaining problems found in the public sector.

564. Comparative Public Administration. (3). Studies the administrative system of selected developed and developing countries emphasizing the various methods and approaches of comparative analysis and the relationships between administrative institutions and their environmental settings.


587. Administrative Theory and Behavior. (3). A study of organization theory and the various approaches to the study of organization.

700. Advanced Directed Readings. (3). Repeatable for credit. Prerequisite: departmental consent.

701. Method and Scope of Political Science. (3). Emphasizes philosophy of science and methodology (as distinguished from method and technique) and exposes students to recent works of methodological import in the various subfields within the discipline. Prerequisite: departmental consent.

720. Scope of Public Administration. (3). Cross-listed as P. Adm. 710. Review of the scope of the field of public administration including a survey of key concepts and schools of thought underlying the field and identification of issues shaping the future development of the field.

750. Workshop. (2-4). Prerequisite: instructor’s consent.

760. Local Government Finance. (3). Cross-listed as Econ. 760. An analysis of state and local government expenditure and revenue systems with an introduction to state and local financial administration. Prerequisites: Econ. 202Q and a course in statistics or instructor’s consent.

Courses for Graduate Students Only

810. Seminar in Comparative Government. (3). The comparative study of selected aspects of the politics and institutions of foreign governments. Prerequisite: departmental consent.

821. The Budgetary Process. (3). Analysis of the development and utilization of the budgetary process in government administration emphasizing the budget in relation to its role in policy formulation. Prerequisite: departmental consent.

835. Seminar in International Relations. (3). Analysis of special problems in, and approaches to, the study of international relations. Prerequisite: departmental consent.

841. Seminar in Urban Politics. (3). An intensive analysis of urban politics emphasizing individual research projects. Prerequisite: departmental consent.

842. Administration in Local Government. (3). Examination of administrative processes and problems in local government, including the role of the professional chief executive. Examines problems from the following: labor-management relations, program evaluation, county government reform, governmental decentralization, citizen participation, grant-in-aid programs, interlocal cooperation, affirmative action requirements and service contracting. Prerequisite: Pol. S. 317.

845. Seminar in Political Theory. (3). Detailed study of the relevant works of a major political philosopher and his/her contribution to contemporary thought. Prerequisite: departmental consent.


852. Seminar in Local Government. (3). Examination of administrative processes and problems in local government, including the role of the professional chief executive. Examines problems from the following: labor-management relations, program evaluation, county government reform, governmental decentralization, citizen participation, grant-in-aid programs, interlocal cooperation, affirmative action requirements and service contracting. Prerequisite: departmental consent.

855. Seminar in American Politics and Institutions. (3). An analytical study of selected topics in the politics of administration of governmental organizations. Prerequisite: departmental consent.

856. Seminar in American Politics and Institutions. (3). An analytical study of selected topics in the politics of administration of governmental organizations. Prerequisite: departmental consent.

860. Seminar in American Politics and Institutions. (3). Analytical study of selected topics in the politics of administration of governmental organizations. Prerequisite: departmental consent.

874. Internship. (3-6). S/U grade only. An intensive applied learning experience supervised by a University department or committee. To receive credit, a student must secure approval of a written report from his/her own department. Prerequisite: departmental consent.

875. Research Design. (3). S/U grade only. Requires the development of a research design for the thesis. The design must be submitted to a departmental committee for evaluation and approval. Prerequisite: departmental consent.

876. Thesis. (1-3).
Psychology

The course of study is designed to provide a breadth of knowledge in the field of psychology. Accordingly, the major requires students to choose courses from foundation areas (Group 1); traditional human oriented areas (Group 2); and applied areas (Group 3).

The program is designed to prepare students for postgraduate work in psychology but is flexible enough to accommodate the interests of students who do not intend to pursue graduate study in psychology. Such students may be career oriented (e.g., social work, management training, etc.) or simply have an interest in learning more about why we behave as we do.

Major: The major for the Bachelor of Arts (BA) degree consists of a minimum of 30 hours in psychology, at least nine of which are earned at Wichita State. Psy. 111Q is prerequisite for all higher number psychology courses. All BA majors are required to take Psy. 111Q, 401, 411 and 601. In addition, six hours must be taken from each of the groups listed below:

Group 1: Psy. 302, 322, 332, 342Q, 402, 502Q, 512, 522, 532, or 622
Group 2: Psy. 344Q, 342Q, 334Q, 404, 414, 514, 524, 534, 544, or 704
Group 3: Psy. 316, 336, 386, 406, 416Q, 426, 516, 526, 536, 546, 556, or 756

Minor: The minor consists of a minimum of 15 hours selected in consultation with the student's major adviser.

Lower-Division Courses

108. Stress and Stress Management. (3). 2R
110L. Introduction to the theories of stress and a survey of major stress management techniques. Class discussion emphasizes the conceptualization of stress and its social impact; complemented by stress reduction techniques. Course does not satisfy the University's social science requirement nor does it count for a psychology major.

111Q. General Psychology. (3). Division B course/elective. An introduction to the general principles and areas of psychology. Includes learning, perceiving, thinking, behavioral development, intelligence, personality and abnormalities of behavior. Course is a prerequisite for advanced and specialized courses in psychology.

150. Workshop in Psychology. (1-4).

Upper-Division Courses

302. Psychology of Learning. (3). Explores basic principles of how organisms learn. Highlights key concepts such as reinforcement and punishment, generalization of behavior across settings and extinction of specific behaviors. Discusses important research, theoretical issues and current trends. Prerequisite: Psy. 111Q.

304Q. Social Psychology. (3). Division B course/elective. A study of how social behavior is influenced by the behavior and characteristics of others. Includes attitude formation and change, attribution, interpersonal attraction, impression formation and compliance, as well as the application of social psychological principles to an understanding of prosocial, aggressive and sexual behavior. Prerequisite: Psy. 111Q.

316. Industrial Psychology. (3). An introduction to the many roles of scientific psychology in the selection, training, evaluation and general welfare of people in the workplace. Includes employee morale, job satisfaction, leader behavior, fair employment practices and sources of worker stress. Prerequisite: Psy. 111Q.

322. Cognitive Psychology. (3). Presents a coherent picture of human memory and cognition within the framework of the information-processing approach. This approach views the individual as an active, constructive planner in remembering and organizing new and prior learned knowledge. Includes the study of attention, memory, thought, decision making and problem solving processes. Prerequisite: Psy. 111Q.

342Q. Psychology of Personality. (3). Division B course/elective. An examination of psychoanalytic, behavioral, trait and other contemporary theories of human personality. Given considerable major factors influencing personality, results of research in the area, ways of assessing personality and some of the methods of treating personality disorders. Presents and discusses case studies. Prerequisite: Psy. 111Q.

332. Psychology of Perception. (3). An exploration of current research and theory in perception and sensation. Emphasizes how organisms come to perceive and understand their environment with regard to perception of space, form, objects and events. Also gives considerable attention to motivation and personality factors in perception. Prerequisite: Psy. 111Q.

334Q. Developmental Psychology. (3). Cross-listed as Geron. 404. A descriptive survey of human development from conception to death emphasizing the interplay of environmental, genetic and cultural determinants of development. Selected topics emphasized and elaborated by demonstrations and class projects. Prerequisite: Psy. 111Q.

356. Alcohol Use and Abuse. (3). A study of the individual, social and cultural aspects of alcohol use. Investigates both nonproblem and abusive drinking, research on why people drink, prevention of problems linked to alcohol use, treatment of alcoholism and the needs of special populations. Includes investigation of combined alcohol and drug abuse as well as study of psychiatric and drug use of other than alcohol. Prerequisite: Psy. 111Q.

342Q. Psychology of Motivation. (3). Division B course/elective. Examines the psychological and biological forces leading to goal-directed acts to understand the complexity of influences upon behavior. Motivational topics include reward and punishment, stress, aggression, achievement and the role of the brain structures in influencing organized behavior. Prerequisite: Psy. 111Q.

386. Human Factors Psychology. (3). The study of how people respond to the demands of complex machines and the varied environments of workplace, home and other settings. Course introduces the tools and methods of machine, task and environment design to achieve the matching of human capabilities and the demands of machines and environments so as to enhance human performance and well being. Prerequisite: Psy. 111Q.

401. Psychological Statistics. (3). Introduces basic quantitative techniques for the description and measurement of behavior, as well as tests for making decisions regarding the comparison of data. Covers probability models, t, chi square and F. Prerequisites: Psy. 111Q and Math. 171 or 112.

402. Psychology of Consciousness. (3). Examines consciousness from two perspectives: as a psychological state ranging from comas to 'peak experiences' and as a framework for understanding consciousness, its development from conception to death, and its relationship to the brain and to cognitive processes. Prerequisite: Psy. 111Q.

404. Psychology of Aging. (3). Cross-listed as Geron, 404. An examination of the issues surrounding the adult aging process. Includes personality and intellectual change, mental health of the elderly and the psychological issues of extending human life. Special emphasis on the strengths of the elderly and prevention of psychological problems of the elderly. Prerequisite: Psy. 111Q.

406. Introduction to Community Psychology. (3). A critical examination of the historical, theoretical and empirical bases of community psychology and community mental health. Presents contemporary models of community psychology including the ecological and social action perspective. Includes social support, self-help, social policy and the prevention of psychosocial problems. Prerequisite: Psy. 111Q.

411. Research Methods in Psychology. (4). 3R; 3L. Covers the philosophy of research methods, experimental designs, appropriate data analysis techniques, and historical trends and developments in experimental psychology. The laboratory exposes students to research methods in psychology. Active involves all students in research project(s). Prerequisite: Psy. 401.

414. Child Psychology. (3). Covers psychological development from conception through infancy and childhood. Includes the development of language, perceptual and cognitive functioning, social-emotional attachment and socialization. Attention to practical issues of discipline and child rearing. Prerequisite: Psy. 111Q.

416Q. Psychology and Problems of Society.
(3). Division B course/elective. A study of the special role of psychological theory, research and principles applied to contemporary social issues and problems including environmental concerns, problems in the schools, substance abuse, nuclear proliferation, racism/sexism, child abuse, juvenile delinquency, aggression, behavioral control, aging, technology, etc. Prerequisite: Psy. 111Q.

426. Psychology of Work. (3). Selects from standard topics of industrial psychology; examines in greater depth the seriousness of job satisfaction problems, effects of technological change, membership in unions, control of productive workers, facts and myths about the working woman and other similar topics. Prerequisite: Psy. 111Q.

428. Field Work in Psychology. (3). Special projects and practicums under supervision in public and/or private agency settings. Psychological study, observation, service and/or research may be undertaken with prior approval by the department. Repeatable for a maximum of six hours. Only three hours may be earned per semester. Offered Cr/NC only. Prerequisites: Psy. 111Q and departmental consent.

481. Cooperative Education. (1-3). Provides practical experience under academic supervision, that complements the student's academic program. Consultation with and approval by an appropriate faculty sponsor is necessary. Offered Cr/NC only.

Courses for Graduate/Undergraduate Credit

502Q. Comparative Psychology. (3). Division B course/elective. Compares and contrasts psychological and ethological analyses of behavior. Stresses the evolution and development of behavior. Includes a critique of the instinct doctrine and sociobiological interpretations of behavior. Field trips supplement lectures. Prerequisite: one course from Group One.

508. Psychology Tutorial. (3). Selected topics in psychology. Repeatable for a maximum of six hours' credit. Instructor's consent may be required. Check Schedule of Courses. Prerequisite: Psy. 111Q.

512. Primatology. (3). A survey of the primates (including humans) and their behavior. Includes principles of evolution and taxonomy, the transition to hominids, the evolution of behavior, the development of language, learning in the primates and the development of behavior. Prerequisite: Psy. 111Q.

514. Psychology of Health and Illness. (3). A survey of the relationships between psychology/behavior and physical health and illness. Includes stress and coping, health habits, symptom perception, health care provider-client relationships, hospitalization, and prevention. May include a self-study of life style and behavior in relation to health and illness. Prerequisite: Psy. 111Q.


522. Biological Psychology. (3). A survey of the biological foundations of behavior. Includes the evolutionary basis of behavior, behavior genetics, a critical analysis of brain-behavior relationships, the role of hormones in behavior, and neurochemical correlates of behavior. Prerequisite: Psy. 111Q.

524. Advanced Psychology of Personality. (3). More intensive treatment of the topics of psychology of personality emphasizing contemporary theories, research and application of the psychological study of personality. Prerequisite: Psy. 324Q.

526. Psychological Testing and Measurement. (3). A critical analysis of the psychological foundations of tests and the interpretation of test findings. Surveys several tests representing the areas of intelligence, personality, normal and abnormal psychology, interests, special abilities and aptitudes to illustrate general principles of testing. Prerequisite: Psy. 401.

532. Psycholinguistics. (3). Cross-listed as Ling. 545. Survey of psychological, linguistic and informational analyses of language. Includes the performance-competence distinction, child development of speech, animal communication systems and the relation of language to thought. Prerequisite: Psy. 111Q.

534. Psychology of Women. (3). Cross-listed as Wom. S. 534. Psychological assumptions, research and theories of the roles, behavior and potential of women in contemporary society. Prerequisite: Psy. 111Q.

536. Behavior Modification. (3). A study of the basic assumptions, principles and issues of behavioral approach to helping persons with psychological problems. Includes demonstration and individualized practice in general behavior modification skills. May include self-study of an appropriate faculty sponsor. Offered Cr/NC only. Prerequisites: Psy. 111Q and instructor's consent.


546. Practicum in Applied Behavior Analysis and Social Learning. (3). Placement in local human service agency for about eight hours a week for 14 weeks. Under supervision, students assist in the development and delivery of services at the agency site. Repeatable once. Prerequisites: Psy. 536 and instructor's consent.

556. Introduction to Clinical Psychology. (3). A survey of current ethical, conceptual and research issues involved in the assessment and treatment of psychopathology. Reviews contemporary psychotherapies emphasizing the relative efficacy of each and the therapeutic mechanisms through which they initiate behavioral change. Prerequisite: Psy. 324Q.

568. Computer Applications to the Behavioral Sciences. (3). 2R; 2L. Introduces computer applications to the behavioral sciences including 1) techniques of analyzing experimental data, 2) statistical applications, 3) interactive computing, 4) "canned" statistical programs, 5) word processing and 6) other current computer applications. Prerequisites: nine hours in the social sciences.

601. Systems and Theories in Psychology. (3). Includes behaviorism, Gestalt psychology, structuralism and others. Makes an attempt to develop the logical relations of these theories to each other as well as to common historical themes and current issues. Prerequisite: 15 hours of psychology including Psy. 411.

608. Special Investigation. (1-3). Upon consultation with instructor, advanced students with adequate preparation may undertake original research or directed readings in psychological problems. Repeatable for a maximum of six credit hours. Requires consultation with and approval by appropriate adviser prior to registration. Prerequisites: nine hours in psychology and instructor's consent.

622. History of Psychology. (3). Traces the development of philosophical and empirical concepts of psychology from the ancient Greeks through the 19th century. Examines the origins and various views of the body-mind relationship. Emphasizes the influences of naturalistic assumptions and research methods on 20th century psychology. Prerequisites: nine hours of psychology or instructor's consent.

704. Advanced Social Psychology. (3). An intensive review of selected contemporary issues in social psychology. Prerequisite: Psy. 304Q.

728. Seminar in Psychotherapy. (3). Provides an in-depth description and critical analysis of various theories and methods of psychotherapy, an examination of the efficacy of these therapeutic approaches and a survey of common issues in psychotherapy, such as process and outcome, and client and therapist variables in the therapeutic process. Prerequisites: Psy. 111Q and instructor's consent.

748. Research and Development in Applied Settings. (3). 2R; 2L. An introduction to research and development activities in industry. Lectures cover sources of research ideas, funding sources, use of company resources, technical communications, assembling literature, research design and publishing practices, lab work involves practice in preparing industry-type proposals and presentations, schedules and budgets and analysis of industry research proposals. Prerequisite: 15 hours of psychology or instructor's consent.

750. Psychology Workshop. (1-3). Specialized instruction, using various formats in selected topics and areas of psychology.

756. Aerospace Psychology. (3). Exploration of the many roles of scientific psychology in aviation and aerospace science. Surveys the research and literature in areas such as psy-
and aviation safety. Prerequisite: 15 hours of aircrew skill requirements and training, pilot workload, cockpit control and display systems and aviation safety. Prerequisite: 15 hours of psychology or instructor's consent.

**Courses for Graduate Students Only**

802. Seminar in Community-Clinical Psychology I. (3). Introduces basic historical, conceptual, research, methodological and ethical issues in community-clinical psychology. Examines the responsibilities and roles of psychologists in the promotion of human functioning. Reviews models and determinants of human behavior from individual, developmental and ecological/contextual perspectives. Details the reciprocal relationship between research and practical applications of psychological knowledge and the application of that knowledge to human psychosocial problems. Prerequisite: instructor's consent.

803. Seminar in Community-Clinical Psychology II. (3). Introduces methods of assessment and intervention used to promote human functioning in the contexts of primary and secondary prevention and clinical treatment of human psychosocial problems. Describes and integrates theories and methods relevant to the assessment of persons, environments, agencies and communities. Details theories and methods of intervention, including psychotherapy, consultation, social action and organizational development. Students apply these theories and methods to selected psychosocial problems. Prerequisite: Psy. 802.

804. Seminar in Behavioral Development. (3). A critical analysis of the concept of development and of theories of behavioral development. Begins with a review of the concept of interactive levels and proceeds to a discussion of modern evolutionary thought. Examines the concept of development from psychological, biological and epistemological perspectives. Also critically evaluates various theories of human development. Prerequisite: instructor's consent.

811. Seminar in Cognitive-Behavioral Assessment. (4). 3R; 3L. Surveys issues of reliability and validity; provides description, critical analysis and practice in clinical use of such psychological assessment methods as interviewing, observation, self-report and standardized intelligence and personality tests. Focuses upon comprehensive clinical assessment, including integration and reporting of assessment data for treatment planning. Prerequisite: instructor's consent.

815. Clinical Research and Practice. (3). Gives the student further experience in clinical skills and clinical research. Students are supervised in their clinical work with individual clients seen through the departmental clinic. May be taken for a maximum of six credit hours. Prerequisite: instructor's consent.

821. Biological Foundations of Behavior. (3). Reviews various biological influences on behavior and evolution genetics, biochemistry and physiology. A consideration of the development and anatomy of the nervous system forms the core of the course. The position developed is that behavior depends on biological as well as environmental factors. Prerequisite: instructor's consent.

822. Cognitive Foundations of Behavior. (3). Focuses on human beings as information processing systems. This approach views the individual as an active, constructive and planning person in remembering and organizing new and prior learned knowledge. Includes the study of memory, language, speech, thought, decision making and problem solving processes. Prerequisite: instructor's consent.

823. Personality and Individual Differences. (3). Provides an advanced understanding of the theories and measurement of personality and individual differences. Also discusses the utilization of this information to an applied psychological setting. Prerequisite: instructor's consent.

824. Social and Development Foundations of Behavior. (3). Examines basic assumptions, theories and methods in social and developmental psychology. Describes and analyzes research concerning the functional significance of social relationships for development and the embeddedness of behavior in social, ecological and cultural contexts, focusing on a number of substantive issues such as person perception and social cognition, affiliation and attachment, socialization and interpersonal interaction, social support and social roles and contexts over the life span. Considers applications of theories and research in social-development psychology to the solution of individual and social problems. Prerequisite: instructor's consent.

825. Seminar in Environmental Psychology. (3). Explores historical, theoretical and empirical bases of environmental psychology. Presents contemporary models of environmental psychology including the ecological, social, community and human factors perspectives along with a historical review of the field. Could include behavior-environment congruence, person-environment fit, social impact assessment, social policy and the prevention of psychosocial problems through environmental intervention. Prerequisite: instructor's consent.

826. Seminar in Behavior Therapy. (4). 3R; 3L. A review of the theoretical and empirical support for specific behavior therapeutic practices. Approaches may include systematic desensitization, flooding, contingency management techniques and aversive therapies. Also discusses the interface between behavioral assessment and clinical practice. Prerequisite: instructor's consent.

830. Seminar in Community Psychology. (3). Comprehensive overview of theory, research and practice in the emerging field of community psychology from the perspective of general systems theory. Includes prevention, consultation, community mental health and a community vs. individual perspective to human and social problems. Prerequisite: instructor's consent.

831. Research in Community Psychology. (3). An examination of the perspective of community psychology specifically concerning the applied methods of needs assessment and program evaluation. Special emphasis on how to use applied research methods to precipitate planned community and organizational change and social reform. Prerequisite: instructor's consent.

832. Practicum in Community-Clinical Psychology. (3). Provides supervised practice in such areas as psychological assessment, intervention and consultation, program evaluation and development, paraprofessional training and preventive programs in community-clinical agencies and organizations. Repeatable for a maximum of nine credit hours. Prerequisite: instructor's consent.

833. Psychological Service Agencies. (3). An in-depth examination of psychological service agencies with regard to structure, functions, financing, goals, planning, development, evaluation and accountability. Prerequisite: instructor's consent.

834. Seminar in Consultation and Counseling. (3). Examines the theories and techniques of consultation, counseling and interviewing as applied to individuals, organizations and systems. Prerequisite: instructor's consent.

835. Seminar in Prevention. (3). Reviews the historical, theoretical and empirical bases of prevention psychology. Presents contemporary models of prevention psychology including the ecological, social and community mental health perspectives. Could include primary prevention, empowerment, community based prevention, self-help, social policy and the prevention of psychosocial problems through environmental intervention. Prerequisite: instructor's consent.

836. Seminar in Personality and Psychosocial Disorders. (3). Relationship of normal behavior development and maladjustment and also a critical review of theory and research. Prerequisite: instructor's consent.


852. Advanced Research Methods I. (4). 3R; 3L. Part one of a two-course sequence aimed at advanced treatment of statistical and research design issues. Statistical methods included are analysis of variance, analysis of covariance, multiple comparisons and multiple regression. Design issues include research planning, validity, quasi vs. experimental designs, prediction vs. explanation and modeling. The associated lab provides basic computer skills for access to the mainframe and the basic training in SPSS-X, SAS and BIOMED statistical routines. Prerequisite: instructor's consent.

853. Advanced Research Methods II. (4). 3R; 3L. Continuation of Psy. 852. Statistical techniques emphasized are a continuation of multi-
The degree is made up of three elements-the core curriculum, an academic foundation and real world application. Includes the study of principles of individual behavior and some of the variables of which it is a function as illustrated by respondent and operant conditioning along with some areas of application. Prerequisites: Psy 302 and instructor’s consent.

865. Seminar in Psychology of Learning. (3). Intensive study of theory and research in learning processes. Includes the study of principles of individual behavior and some of the variables of which it is a function as illustrated by respondent and operant conditioning along with some areas of application. Prerequisites: Psy 302 and instructor’s consent.

870. Seminar in Current Developments. (3). Intensive study of current issues, techniques, research and application. Repeatable for different topics for a maximum of six hours. Prerequisite: instructor’s consent.

872. Seminar in Comparative Psychology. (3). Intensive study of psychological and ethological research and theories of behavior. Oriented around the evolution and development of behavior. Includes a review of the concept of integrative levels in psychology. Prerequisites: Psy. 502Q and instructor’s consent.

873. Seminar in Motivation and Emotion. (3). Intensive study of theory and research in motivational and emotional processes. Prerequisite: instructor’s consent.


885. Seminar in Perception. (3). Intensive study in theory and research in perceptual processes. Prerequisites: Psy. 332, or equivalent, and instructor’s consent.

900. Doctoral Dissertation. (3). Graded S/U only. Repeatable for credit. Prerequisite: admission to candidacy and instructor’s consent.

901. Research Seminar. (1-3). Graded S/U only. Repeatable for credit. Exposes students to research in its varied forms and at its various stages, i.e., its conceptualization, design, execution and presentation. Prerequisite: instructor’s consent.

902. Measurement of Human Performance. (3). The logic of fundamental measurement is developed and applied to human performance from detection to decision. Signal Detection Theory (SDT) is developed and compared with threshold theory. Demonstrates procedures for assessing both detection and discrimination under both SDT and threshold theory. Information measurement and utility theory is developed and applied to the transmission and coding of information and to decision making respectively. Examines measures of work reliability and well-being. Prerequisite: instructor’s consent.

903. Seminar in Human Factors. (3). Focuses on a sample of contemporary human factors problems through review of current literature and theory. Content changes as new problems attain prominence internationally but a typical sample might be human factors in the aging population; human factors in airport security and baggage marking; and human factors in third-world industrialization. Prerequisites: completion of 9 hours of Foundations of Psychology doctoral courses; for doctoral students from other disciplines, instructor’s consent after an interview.

904. Seminar in Motor Processes. (3). Focuses on motor processes in human performance. Motor processes, sensory processes, cognitive processes and affective processes comprise the major domains of human factors psychology. Seminar explores the macro-anatomy of human motor performance; theories of human control responses; the nature and retention of skill performance; and constraints on ability and strength which impact on the design of the human-machine interface. Prerequisites: any three of the following foundations courses: Psy. 821, 822, 823, 824 and instructor’s consent.

905. Seminar in Sensory Processes. (3). Focuses on human sensory systems, their roles and functions in the processing of physical stimuli and their conversion to information, and explores the application of sensory behavior in human factors psychology. After review of the anatomy and neurophysiology of sensory processes, emphasis on contemporary research and literature in human sensory behavior. Prerequisite: instructor’s consent.

906. Seminar in Software Psychology. (3). Intensive study of principles and methods of Engineering Psychology (human factors) applies to the design and evaluation of computer software. Topics include research methods, programming as human performance, software quality evaluation, organizing the programming team, interactive interface issues, and the design of interactive computer systems. Prerequisite: instructor’s consent.

906. Psychological Human Factors. (3). Focuses on the interaction of people with machines and technology in a variety of environments. Provides depth to the topics surveyed in Psy. 386 and serves as a means of integrating cognitive, biological, and perceptual psychology in applied settings. Prerequisite: completion of undergraduate course in cognitive psychology or Psy. 822 and instructor’s consent after interview for doctoral students from other disciplines.

Public Administration

Students planning to continue their education in pursuit of a Master of Public Administration degree should structure their undergraduate degree plans to include program prerequisites. The Master of Public Administration program consists of 39 graduate hours and it has three prerequisites: (1) microeconomics, (2) an introductory course in public administration and (3) a basic course in statistics. Students can be accepted in a "full-standing" status prior to the completion of program prerequisites, but the deficiencies must be overcome within the first academic year.

The Master of Public Administration program uses an important blending of academic foundations and real world application. Because the program is housed in the Hugo Wall Center for Urban Studies, faculty and students are able to test immediately theoretical positions through state and local government research and application. This effort to blend theory and application is further enhanced through adjunct faculty from state and local government.

The final opportunity for joining theory and application comes in the form of program completion options. Students have opportunities for internships with national, state and local government. Students with well-established career paths can tailor a portion of their course work to match their professional needs. All students complete the program through an applied research project which addresses an issue of professional concern or a thesis.

The degree is made up of three elements—the core curriculum, an area of specialization and a completion option. Students may develop a specialization in one of three areas: management, financial management or policy analysis. The remainder of the program can be structured to match the career aspirations of the student using course offerings from selected University departments.

Courses for Graduate/Undergraduate Credit

625. Computer Applications for Public Policy. (3). Familiarizes students with major types of software applications for IBM compatible microcomputers and their use in public policy analysis. Prerequisite: enrollment in MPA program or sponsorship by local government.

700. Urban Affairs. (3). A study of the policy issues faced by local government in an urban setting from a multidisciplinary point of view. Prerequisite: enrollment in urban affairs program or instructor’s consent.

710. Scope of Public Administration. (3). Cross-listed as Pol. S 710. Reviews the scope of
the field of public administration including a survey of key concepts and schools of thought underlying the field and identification of issues shaping the future development of the field.

720. Urban Systems. (3). Cross-listed as IE 720. Develops the principles of systems analysis and the tools by which these principles can be applied. Takes example applications from urban problems. Emphasizes the formulation of realistic models and solutions. Computer techniques are developed in class as necessary. Prerequisite: instructor's consent.

730. Decision Making. (3). Cross-listed as Mgmt. 680. Includes theories of decision-making ability under varying degrees of uncertainty. Includes theories of decision making, environment for stimulating creativity, cognitive inhibitors to problem identification, alternative evaluation techniques, decision implementation and utilization of quantitative tools in decision making. Prerequisite: instructor's consent.

740. Policy Evaluation. (3). Assists public sector monitoring and control of program and service delivery quality. The social sciences offer a variety of research tools and methods that have management feedback applications which are appropriate for evaluating performance. Prerequisite: instructor's consent.

755. Special Topics in Urban Affairs. (3). Provides students with an opportunity to engage in advanced study in urban topics that are of immediate concern and arise only occasionally. Content varies with issues that arise, student needs and faculty expertise. Directed to Master of Public Administration students. May be repeated if topics are different. Prerequisite: instructor's consent.

761. State and Local Financial Systems. (3). Deals with selected aspects of state and local government financial management. Introduction to fund accounting, costing of government services, capital budgeting and asset management.

770. The Environment of Public Administration. (3). Surveys the political and economic institutions that underlie the practice of public administration. Includes political systems, constitutional authority, legislative process, intergovernmental relations, the price system, market failure, government regulation, public finance and public choice. Prerequisites: Pol. S. 321 and Econ. 202.

Courses for Graduate Students Only

875-876. Thesis. (3-3). Prerequisite: adviser's consent.

890. Internship. (3). Integrates academic pursuits and practical experience. Students admitted to the internship are assigned to work in an approved government, community or private organization for a period of three to 12 months.

898. Applied Research Paper. (6). The applied research paper under the direction of a faculty committee develops and measures competency in the areas of writing research and policy conceptualization. Each paper addresses a policy relevant question and the delivery of a finished product with policy application. To be taken in the last semester of course work.

Religion

The Department of Religion offers students an opportunity to inform themselves about the major religious traditions of the world and to think critically and constructively about religion as a dimension of human experience and as a mode of human expression. The curriculum includes courses on major religious traditions, significant issues in religion and methods of studying religion.

The Bachelor of Arts degree in religion was phased out beginning in 1987; however, students presently enrolled in the program will be accommodated. An emphasis in religion is available through the general studies program and a minor in religion is possible.

Students contemplating an emphasis or minor in religion should discuss their academic program with a member of the department.

Minor. A minor in religion requires a minimum of 15 hours. A maximum of six may be taken at the 100 level.

Lower-Division Courses


120G. The Biblical Heritage. (3). Division A course/elective. The collection of books known as the Bible has been central to a number of religious traditions for more than 2,000 years. Course examines the central religious ideas and motifs of Biblical literature and then proceeds to study how the Jewish and Christian traditions have interpreted those ideas and melded them in various forms and combinations. Course is historical and analytic not confessional; culminates with a survey of the roles played by the Bible in contemporary American culture.

125. World of the Bible. (3). Seeks to understand the Bible within its geographical, historical and religious context—the polytheistic world of the ancient Near Eastern and Mediterranean civilizations of Babylon, Assyria, Egypt, Persia, Greece and Rome from the period of the patriarchs to the rise of Christianity. Special attention to similarities and differences between Biblical ideology and views current in neighboring religious traditions.

127. Magic, Witchcraft and Religion. (3). Cross-listed as Anthr. 127. An examination of various concepts concerning the realm of the supernatural as held by primitive people. Course relates such religious and magical beliefs—and the resultant practices—to the larger patterns of cultural context.

130Q. Introduction to Religion. (3). Division A course/elective. An introduction to the major religious traditions and problems, both Eastern and Western, with some emphasis on the methods used in the study of religion.

131G. Traditional Religion and the Modern World. (3). Division A course/elective. A study of some of the traditional religious systems (Buddhist Hindu, Confucian, Taoist, Judaic and Christian) and of several of the important modern criticisms of religion with a view to confronting the problem of whether traditional religion can be significant in the modern world.

150. Workshop in Religion. (2-4).

210. Current Religious Issues. (3). A critical study of contemporary issues in the West with some attention to non-Western religions. Considers the relationship of religion to such topics as race, war, secularism, population explosion and politics.

215. The Meaning of Death. (3). An exploration of the images, interpretations and practices that constitute the response to death in major religious traditions.

221. Judaism. (3). The history and central teachings of traditional Judaism and its modern varieties (Reform, Orthodox, Conservative, etc.). Focuses on Jewish customs and practices as well as Jewish religious thought.

222Q. East Asia. (3). Cross-listed as LAS-I 222Q, Hist. 222, Pol. S. 222Q. Division A course/elective. A survey of basic topics on China, Korea and Japan, including history, culture, society, philosophy, religion, politics and economics. Taught by a team of instructors from several departments.

223. Hinduism and Buddhism. (3). Hinduism and Buddhism are closely related, both growing out of a unique critical period in the history of India's ancient Vedic tradition. The worldview from which they arise is sharply different from that which has been characteristic in the West; one of its consequences has been the direct investigation of consciousness by sophisticated meditation techniques, a type of religiosity for which India has become famous. Course investigates the formation of that world view and explores the diverse ways in which it has been elaborated and interpreted as a way of life and path of spiritual cultivation in the Hindu and Buddhist traditions.

224Q. Christianity. (3). Division A course/elective. An overview of Christianity from New Testament times to the present stressing historical developments in religious life and theology. Includes Catholic, Protestant and Orthodox Christianity; explores contemporary trends and problems.

225. Jesus. (3). There have been varied responses to and multiple interpretations of the life and teaching of Jesus. Course examines
the development and function of traditions about Jesus in Biblical, extrabiblical and more recent, popular sources.

240. Religion in America. (3). A survey of the beliefs, practices and issues current in major American religious bodies with some attention to minor religious denominations such as the Black Church, Christian Science and the Latter Day Saints.

245. Islam. (3). The religion in its geographical, social, political and cultural context, both Arab and non-Arab.

250Q. Eastern Religions. (3). Division A course/elective. An introduction to the religions of India and China. Studies and contrasts Hinduism, Buddhism, Jainism, Taoism and Confucianism. Tries to understand the religious life and texts of these ancient and dynamic cultures from the vantage point of the believers themselves.

255. Zen and Taoism. (3). Zen is a form of Buddhism that emphasizes spontaneity and the ultimacy of the here and now, employing startling nonintellectualist methods to free minds of the routine world of distinctions, plurality and linear time. It represents a vision that is at once Buddhist and deeply Chinese; its most distinctive features may in fact be best understood as a Buddhist development of ideas, values and orientations found in China's ancient Taoist tradition. The Taoist view of the universe as a harmonious organic unity in which humans fitly participate by selfless spontaneity rather than calculated intervention is radicalized in Zen; at the same time, it is the Taoist sensibility that leads to the Zen departure from more traditional Buddhist approaches to enlightenment. Course traces these developments, beginning with a consideration of Taoism and then tracing the transformation of Buddhism in China to its culmination in the unique methods and teachings of Zen.

260Q. Psychic Phenomena. (3). Spiritual traditions have everywhere and at most times appeared in a triple world: natural, divine and intermediate. The intermediate world of the psychic, the occult, the astral, is the subject of philosophical/psychological investigation. Includes psychic out-of-body states, ESP, clairvoyance, telepathy, ethereal bodies in Hinduism and the Tibetan Bardos. Lecture, discussion and student reports. Visits by persons with expertise in psychic reading, out-of-body states, Kirlan photography and ESP.

280. Special Studies. (3). A concentrated examination of a significant figure, event or issue in religion or the study thereof. Repeatable for credit. Prerequisite: departmental option.

281. Cooperative Education. (1-4). Offered Cr/Nr only.

Upper-Division Courses

311. Old Testament Topics. (3). An in-depth study of a major facet of the religion of the Hebrew Bible, such as prophecy, law, covenant, historiography and wisdom, or a genre of biblical literature, such as poetry or narrative.


323. Protestantism. (3). Traces the development of the Protestant Christian traditions and analyzes its distinctive themes. After a historical survey of this family of Christianity, course explores distinctively Protestant themes, such as justification by faith, the primacy of individual conscience and the primacy of scripture, integrating them with current phenomena.

333Q. Women and Religion. (3). Cross-listed as Wom. S. 333. Division A course/elective. An examination of past and present images and roles of women in religious traditions. Looks at women in the Bible and religious history as well as contemporary criticisms of patriarchal religion and resources for change.

346. Philosophy of Religion. (3). Cross-listed as Phil. 346Q.

364. Zionism and Israel. (3). An examination of the national element in Judaism and the movement that has arisen in relationship to this nationalism in the 19th and 20th centuries. Concludes with an investigation into the relationship between Zionist ideals and the modern state of Israel.

410Q. Comparative Religion. (3). Division A course/elective. An observation and analysis of the patterns found in the characteristic religious phenomena (e.g., myths, symbols, rituals, institutions), with a view to a systematic understanding of human religious life as it has expressed itself throughout history.

419. Modern Atheism. (3). An examination and critical evaluation of some of the seminal critiques of religion in general and Christianity in particular that have been produced in the modern world. Includes selections from such figures as Spinoza, Voltaire, Feuerbach, Marx, Nietzsche, Freud and Camus.

421. Sociology of Religion. (3).

442. Greek and Roman Religion. (3). The transformations in the religions of the Mediterranean world and the Near East between the conquests of Alexander the Great and the triumph of Christianity under Constantine. Covers the traditional forms of Greek and Roman religion, the impact of Greek culture and religion on the East after Alexander, the mystery religions, the spread of Oriental cults in the Roman Empire, Gnosticism, astrology and the development of Christianity within the Roman Empire. At its most inclusive level, course deals with the particular religious synthesis lying at the base of Western civilization: the fusion of Jewish, Greek and Roman patterns of thought in the Christian world of antiquity.


480. Special Studies. (3). A concentrated study of a theologian, a theorist of religion or a religious issue announced by the instructor when course is scheduled. Repeatable for credit. Prerequisite: instructor's consent.

481. Cooperative Education. (1-4). Offered Cr/Nr only.

493. Independent Work. (1-3). Designed for the student capable of doing advanced independent work in a specialized area of the study of religion that is not formally offered by the department. Repeatable for credit. Prerequisite: departmental consent.

Courses for Graduate/Undergraduate Credit

750. Workshop in Religion. (2-4).

790. Independent Study. (1-3). For the student who is capable of doing graduate work in a specialized area of the study of religion not formally offered by the department. Repeatable for credit. Prerequisite: departmental consent.

Portuguese, Russian

See Modern and Classical Languages and Literatures

Sociology/Social Work

A major in sociology provides students with an understanding of human behavior in personal relations such as the family and friendships and how human behavior is affected by larger societal structures and are approved by their advisers. May be counted toward a sociology major. No more than six hours of such courses may be included. With the exception of Sc. Wk. 200Q and 500, social work courses do not count toward the major.

Minor. A minor in sociology consists of
111Q. Introduction to Sociology. (3). Division B course/elective. Introduction to basic concepts, propositions and theoretical approaches of sociology, including elementary methods of studying social phenomena. The basic course for students who intend to take additional courses in sociology.

212. Introduction to Social Research. (3). A survey of the many research techniques found in sociology and related fields. Stresses conceptual understanding of all phases of the research process. Prerequisite: Soc. 111Q.


Option Courses (12 hours)

Soc. 315Q, Courtship and Marriage, or Soc. 515, Sociology of the Family (3 hours)

Sociology Electives (3 hours)

Soc. 315Q, 316, 515 or 516 when not counted as part of the option courses.

Other any courses in sociology may also be counted toward the emphasis with adviser’s consent.

Students are encouraged to complete their distributional requirements by taking related courses such as Sc. Wk. 340Q and Rel. 215 as well as courses in related fields such as curriculum and instruction, women’s studies and anthropology.
491. Cooperative Education in Sociology. (1-3). Provides the student with practical experience under academic supervision, that complements the student's academic program. Consultation with and approval by an appropriate faculty sponsor are necessary. Cr/NC only. Prerequisite: Instructor's consent.

Courses for Graduate/Undergraduate Credit

501. Sociological Statistics. (3). Generally offered fall semester only. Application of descriptive and inferential statistics to sociological problems. Includes measures of central tendency, dispersion and association, simple linear regression, hypothesis testing and analysis of variance. Prerequisites: Soc. 111Q and Math. 111 or 331Q or equivalent.

510. Field Research Methods. (3). An examination of various qualitative research tools and techniques used by sociologists. As part of the learning experience students are involved in direct field observation in natural social environments. Prerequisite: Soc. 111Q.

511. Applied Quantitative Research. (3). An examination of the survey as a tool used to address sociological questions. Includes survey design, sampling, data collection techniques and interpretation of results. Students gain experience in designing and administering surveys. Prerequisite: Soc. 212.

513. Sociology of Aging. (3). Cross-listed as Geron. 513. Analysis of the social dimensions of old age, including changing demographic structure and role changes and their impact on society. Prerequisite: Soc. 111Q.

515. Sociology of the Family. (3). Analysis of American family behavior, including the selection of marriage partners, the husband-wife and parent-child relationships and the relation of these patterns of behavior to other aspects of American society. Prerequisite: Soc. 111Q.

516. Sociology of Sex Roles. (3). Cross-listed as Wom. S. 516. Analyzes the institutional sources of man's and woman's roles, the source of changes in these roles, the consequences of ambiguities and conflicts. Prerequisite: Soc. 111Q.

517. Intimate Relations. (3). Examines the social dimensions of intimacy including an analysis of intimacy in different types of relationships, e.g. romantic, friendship, marriage. Reviews theory and research in the area with a special focus on the place of intimacy in social interaction. Prerequisite: Soc. 111Q.

523. Sociology of Law. (3). The study of law and legal institutions within their social context. Prerequisite: Soc. 111Q.

526. Political Sociology. (3). Social basis and consequences of political behavior. Also includes the study of power and authority problems in the development and maintenance of viable democratic political structures and bureaucratic organization and power. Prerequisite: Soc. 111Q.

527. Violence and Social Change. (3). The analysis of the causal processes and functions of extreme and violent political behavior, i.e., revolutionary, insurrectionary and protest movements. Includes an analysis of consequences for social change. Prerequisite: Soc. 111Q.

534. Urban Sociology. (3). Urban population organization and institutions and programs of city planning. Prerequisite: Soc. 111Q.

537. The Social Consequences of Disability. (3). Cross-listed as Geron. 537. An eclectic survey of the social aspects of disability showing the impact of social values, institutions and policies upon adults with disabilities. Appropriate for both students of sociology and the service professions. Prerequisite: Soc. 111Q.

538. Medical Sociology. (3). An analysis of social and cultural factors related to physical and mental illness. Also includes the dynamics of communication and role relationships among patients and medical personnel and social research and theory relevant to the health professions. Prerequisite: Soc. 111Q.

539. Juvenile Delinquency. (3). The factors related to juvenile delinquency and the measures of treatment and prevention. Prerequisite: Soc. 111Q.*

540. Criminology. (3). The extent and nature of criminal behavior and societal reactions to it. Prerequisite: Soc. 111Q.*

541. Contemporary Corrections. (3). Historical and contemporary programs for the treatment of offenders viewed as societal reactions to criminal behavior. Prerequisite: Soc. 539 or 540.*

598. Internship. (1-6). Supervises persons involved in internships or placements in the community where credit can be given. Prerequisite: departmental consent.

600. Selected Topics in Sociology. (3). Study in a specialized area of sociology emphasizing student research projects. Includes deviant behavior, political sociology, the family and others. Repeatable for a maximum of six hours credit. Prerequisites: Soc. 111Q, instructor's consent and substantive area course.

645. History of Sociological Theory. (3). Analysis of emergence of sociological theory. Prerequisite: nine hours of sociology.

654. Principles and Concepts of Sociology. (3). Critical evaluation of major principles and concepts, their derivation and relationship to systematic theory. Prerequisite: nine hours of sociology.

651. Directed Research. (3). Gives the student further research skills in an area of special interest. All students are under the direction of a member of the graduate faculty who guides them in developing research skills. Prerequisites: Soc. 510 or 511 and instructor's consent.

670. Independent Reading. (1-3). For the advanced student capable of doing independent work in an area of special interest. Prerequisite: 15 hours of sociology and instructor's consent.

750. Sociology Workshop. (1-3). Provides specialized instruction using a variable format, in a sociologically relevant subject. Prerequisite may be waived with departmental consent.

Courses for Graduate Students Only

800. Research Methods in Sociology. (3). The application of research methods to sociological data. Includes research design sampling, data collection techniques, computer-based analysis of data, scaling and report writing. Students design their own research projects. Prerequisites: Soc. 510 or 511 and departmental consent.

815. Seminar on the Family. (3). Review of recent research on the family and the theoretical implications thereof. Prerequisite: Soc. 515 or departmental consent.

820. Seminar in Social Movements. (3). Analysis of the elements in social movements as factors in social and cultural change. Prerequisite: departmental consent.

822. Seminar in Deviant Behavior. (3). In-depth examination of recent theory, methods and research in the area of deviance. Includes implications of future theory development. Prerequisite: departmental consent.

825. Seminar in Organizational Analysis. (3). Exploration of selected problems in organizational theory based on major theoretical and empirical approaches, both classical and contemporary. Prerequisite: departmental consent.

834. Seminar in Urban Sociology. (3). Independent research projects in urban sociology. Prerequisite: departmental consent.

845. Seminar in Sociological Theory. (3). Emphasizes continuities between European and American social theory. The perspective is both historical and analytical spanning the 18th, 19th and 20th centuries and concluding with the works of representative contemporary theorists. Prerequisite: Soc. 645 or 646 or departmental consent.

847. Seminar in Recent Developments in Sociology. (3). Major issues, new theories, new techniques of research, new areas of research and new applications. Repeatable for credit but not to exceed six hours. Prerequisites: 15 hours of sociology and departmental consent.

851. Directed Research. (1-3). For the advanced student who wants to achieve research competence in a specific area. Each student is directed by a member of the graduate faculty in the development of a project in research not leading to thesis research. Prerequisites: Soc. 800 and instructor's consent.

860. Proseminar—Teaching Sociology. (1). Focuses on the teaching of sociology. Emphasis on teaching techniques, course organization
and evaluation. Prerequisite: graduate student status.

878. Independent Reading. (2-3). Advanced systematic reading in a topical area under the tutelage of a member of the graduate faculty. Repeatable for credit not to exceed six hours. Prerequisite: departmental consent.

875-876. Thesis. (3-6).

Social Work
A major and minor are provided in the sociology/social work department for training in various areas of social work and human services. Courses are designed primarily to prepare students for beginning professional social work practice at the bachelor's level, but they also are valuable in preparing students for graduate training in social work. The social work sequence is useful for students planning to enter other helping professions as well as responsible community participation in human concerns. WSU's program is accredited by the Council on Social Work Education. Social work practice requires licensure by the State of Kansas.

Major: A major in social work requires at least 43 hours (34 hours in social work courses and nine hours in related departments) as follows: Sc. Wk. 200Q, 201, 500, 502, 550, 560, 601, 604 and 605. This required curriculum includes nine hours in field instruction (practicum) courses: Sc. Wk. 602 and 605. Requirements in related departments include Soc. 212 and six hours from a list of social and behavioral science courses approved by the social work faculty and selected in consultation with a social work adviser.

Minor: A minor in social work requires at least 19 hours in social work courses as follows: Sc. Wk. 100Q, 200Q, 201, 300, 560 and 570. This required curriculum includes four hours in the internship course Sc. Wk. 570.

Lower-Division Courses

100Q. Explorations in the Helping Professions. (3). Division B course/elective. An introduction to the helping professions as they relate to the whole person. This multidisciplinary course emphasizes the common helping processes of each profession, how they developed and how they differentially relate to human problems.

150. Aspects of Social Work (Workshop). (2-5). Aspects of social work practice relating primarily to paraprofessional work with practitioners regarding basic human needs and the fundamentals of helping. May be offered with Sc. Wk. 750.

200Q. Understanding Social Welfare. (3). Division B course/elective. Introduction to a broad spectrum of community services emphasizing public and private systems which address individual, family and group needs. Systematically examines the relations of area services to larger social welfare institutions and to cultural heritage, including unmet needs, policy trends, current issues and the normative aspects of determining who should be helped and how.

201. Introduction to Social Work Practice. (3). Introduction to the practice of social work. Includes development of social work as a profession: the holistic approach and multilevel intervention strategies used in practice; aspects of the problem-solving process; and attention to the current trends in direct social services. Prerequisites: Soc. 111Q and Psy. 111Q.


Courses for Undergraduate/Graduate Credit

500. Social Welfare Policy and Services I. (3). Descriptive and analytical approach to the social welfare system, emphasizing its historical, structural and value bases. Includes alternative program strategies of meeting individual and group needs. Prerequisites: Sc. Wk. 200Q and Soc. 212.

502. Strategies and Techniques in Interven­
tional Skills. (4). Introduces the study and practice of interpersonal professional interaction skills within the framework of a social work helping process. Focuses on developing skills in professional observation, communication, interviewing, recording and reporting. Course is didactic as well as interactive and includes an integrated laboratory component which focuses on experimental learning. Required for social work majors and open to nonmajors. Prerequisite: Sc. Wk. 201 for social work majors, departmental consent for nonmajors.

550. Social Welfare Policy and Services II. (3). Analytical approach to social welfare problems, policies, programs and issues, including an analysis of the influence of values on the formation of social welfare policy. Includes indepth examination of selected issues in public and voluntary areas and alternative methods of meeting needs. Prerequisite: Sc. Wk. 500.

551. Independent Studies. (1-3). Individual projects for social work students who are capable of doing independent work in areas of special interest. Repeatable for credit not to exceed six hours. Prerequisite: instructor's consent.

560. Personal Human Interaction within Soci­ety. (3). Provides a beginning theoretical framework within which the integration of prior knowledge can be made regarding physical, mental and social development of the human being, perspectives on American culture and subcultural variations and their effect on human adaptability in the social environment and the relationship of those entities to beginning professional social work practice. Prerequisites: Sc. Wk. 200Q and six hours from a list of social and behavioral science courses approved by the social work faculty and selected in consultation with a social work adviser.

570. Internships in Social Work. (3-6). Provides a specially designed field experience for special students who need or desire training that will enhance their professional abilities and for whom academic credit is appropriate. Also meets experiential needs of special designated students for whom academic credit is appropriate. Repeatable for credit not to exceed a total of six hours. Prerequisite: instructor's consent.

601. Advanced Social Work Practice. (3). Advanced practice theory emphasizing becoming both knowledgeable and skillful in applying theory to practice. Focuses on developing a clear understanding of concepts, principles, techniques and processes of social work methods as they relate to individuals, families and groups and to the larger community. To be taken concurrently with Sc. Wk. 602 except by departmental consent. Prerequisites: Sc. Wk. 502 and departmental consent.

602. Practicum I. (4). Placement in community social welfare agencies for supervised periods of observation and direct service assignments emphasizing performance of basic practice skills and understanding of the social welfare agency and its role in the community service network. To be taken concurrently with Sc. Wk. 601 except by departmental consent. Prerequisites: a grade of B or better in Sc. Wk. 502 and departmental consent.


605. Practicum II. (5). Placement in community social welfare agencies for supervised direct service assignments emphasizing formulation of appropriate goals. Includes the selection of various social work roles and in-depth development of techniques and skills common to practice in the social welfare field. Sc. Wk. 604 is to be taken concurrently except by departmental consent. Prerequisite: Sc. Wk. 602.

610. Aging: Personal, Social and Professional Perspectives. (6). Cross-listed as Geront. 610. A realistic look at the comprehensive role of social work practice and the helping professions in work with the aging. Focuses on work with individuals, groups and community organizations. Links social with economic and political factors. Highlights current and future developments in social policy, human service practice and demography as the total life cycle is conceptualized. Prerequisite: departmental consent.

750. Social Work Workshops. (1-5). Specialized instruction using a variable format in a social welfare relevant subject. Course may be offered together with Sc. Wk. 150. Prerequisite: instructor's consent.
Women's Studies

The Center for Women's Studies is a resource and research center for scholarship concerning women. The center offers courses and administers the major in women's studies, a discipline which presents an analysis of gender in society through the use of a variety of approaches, including feminist theory. Students investigate such areas as changing gender role expectations, American and cross-cultural social concerns, and the professional and domestic contributions of women to the culture, especially concerning the role of women in the arts and sciences. Women's studies may also be pursued as a part of a dual major: or as a minor by students whose intellectual or vocational interests are best served by a focus on women's studies in conjunction with another academic field.

Major. Within the major in women's studies, students may focus on either humanities or social science women's studies courses, supplementing each track with interdisciplinary courses that apply to either focus. The major requires a minimum of 30 hours of course work with no more than three hours in courses numbered 140 to 149. Other 100-level courses and workshops may not be counted for the major.

In addition to women's studies courses, appropriate cross-listed courses for the major may be selected from such fields as philosophy, sociology, social work, history, English, anthropology, religion, minority studies, psychology, communication and administration of justice. Students considering the major in women's studies should be advised by a women's studies faculty member regarding their academic programs, their vocational goals and the selection of a humanities or social science track in the women's studies major.

To pursue the Humanities focus, the following combinations of courses are possible:

12 hours of required courses, Wom. S. 387Q, 388Q, 587 and 635
9 hours of Humanities women's studies courses (group 2 below) or combination of Humanities and interdisciplinary courses (group 1 below)
3 hours of Social Science women's studies courses (group 3 below)

6 hours of Humanities courses outside women's studies curriculum, with departmental adviser's approval

To pursue the Social Science focus, the following combinations of courses are possible:

12 hours of required courses, Wom. S. 387Q, 388Q, 587 and 635
9 hours of Social Science women's studies courses (group 3 below) or a combination of Social Science and Interdisciplinary courses (group 1 below)
3 hours of Humanities women's studies courses (group 2 below)
6 hours of Social Science courses outside women's studies curriculum, with departmental adviser's approval

Group 1: Interdisciplinary women's studies courses
Wom. S. 380K, 387Q, 388Q, 390Q, 391, 481, 570, 580, 587, 635

Group 2: Humanities women's studies courses

Group 3: Social Science women's studies courses

Minor. The minor in women's studies consists of a minimum of 15 hours of women's studies courses, including Wom. S. 387Q and 388Q. Restrictions on 100-level courses in the major (see above) also apply to the minor.

Lower-Division Courses

140. Journal Writing. (1). Workshop; acquaints students with the concept and practice of journal writing. Reading deals with specific topics such as employment, male-female relations, sexuality, parent-child relations, and organized group activity. Prerequisites: Wom. S. 150C.

180. Special Topics. (1-2). Topics vary by semester. Past topics have included working women and domestic violence.

190G. The American Woman. (3). Division A course/elective. Examines ways our mainstream society 'defines' the American woman through cultural images presented in a wide variety of popular media. In comparing these cultural definitions to the complex realities of women's experiences in America, class introduces many of the basic approaches used in the field of women's studies.

240. Minority Women In America. (3). Cross-listed as Min. S. 240Q.

Upper-Division Courses

316. The American Male. (3). Cross-listed as Soc. 316.

310. Women's Personal Narratives. (3). Explores the literary genre of the journal as practiced by both historical and modern women. Examines works by both well-known diarists and little-known note-keepers. In-class writing and out-of-class assignments; students are encouraged to do daily work in a journal of their own.

331. Women's Biographies and Autobiographies. (3). Examines women's lives as constructed in the literary genre of biographical writing. Because women's lives have been lived in the private rather than the public sphere, the importance of their lives has often been attributed to their domestic accomplishments, personal influence and moral character. Reading biographies of ordinary and extraordinary women in a historical framework reveals ways in which the expression of power.

150. Workshops (1-2). Topics vary by semester. Past topics have included assertive, advertising and related and rape information and prevention.

150C. Assertion Training for Women. (1). Workshop; teaches women to develop assertive skills. Considers some of the changing roles and values of women in our society today and how these create a need for women to be assertive in their professional and personal choices. Examines barriers that exist to assertive behavior and ways to overcome them.

150F. Rape Information and Prevention. (1). Workshop; explores the cultural myths and stereotypes about rape, the legal system, methods of self-protection, community resources providing help for victims and other related issues. Primary focus on prevention of rape itself.

150M. Advanced Assertion Training. (1). For students who have taken Wom. S. 150C. Applies assertive principles and behaviors to specific topics such as employment, male-female relations, sexuality, parent-child relations, and organized group activity. Prerequisite: Wom. S. 150C.
387Q. Women in Society: Cultural Images. (3). Division A course/elective. Examines the roots of ideas about women in our society and women's responses to those ideas as they have attempted to define themselves. Emphasizes cultural images of women in literature, art, myth, philosophy, religion, psychology, education and politics. Also considers women in other cultures and world religions and their impact on women's visions of an alternative future.

51L Women in Early America, 1600-1830. (3). Traces women's contributions and experiences in the early American colonies. Explores theoretical models of poverty and poverty policies and the role of gender in their formulation and implementation. Discusses issues of age, race and family; special attention to poverty among women. Prerequisites: Engl. 101 and 102 and 3 hours of English literature.

541. Women and Poverty. (3). Addresses the problem of poverty among women in the U.S. today and examines existing and proposed public policies designed to alleviate the problem. Explores the role of gender in the formulation and implementation of poverty policy analysis. Discusses issues of poverty among women in Kansas. Prerequisites: 202 and one course in women's studies, including Wom. S. 388Q or instructor's consent.
542. Women in Other Cultures. (3). Cross-listed as Anthr. 542.

543. Women and Health. (3). Cross-listed as Nurs. 543. Examines the historical development of the women's health movement, focuses on current issues relevant to women and health care and explores the roles of women in the health care system and as consumers of health care. Examines self-care practices of women and studies ways to promote positive health practices. Open to non-nursing majors.

570. Directed Readings. (1-3). For students who wish to pursue special reading or research projects not covered in course work. Prerequisite: instructor’s consent.

580. Special Topics. (1-3). Focuses on advanced topics of interest to women's studies.

587. Theories of Feminism. (3). Because feminism is not a single ideological stance or perspective, course examines a variety of ideas underlying feminist cultural critiques and visions for social change. Discusses the contribution of women’s studies to various academic disciplines. Prerequisites: Wom. S. 387Q and 388G, or 6 hours of women's studies courses, or instructor's consent.

635. Leadership Techniques for Women. (3). Cross-listed as Comm. 635. Provides the woman student experience in decision making and improves skills in leadership through role playing and exercise in group dynamics.

Courses for Graduate Students Only

870. Directed Readings. (2-3). For graduate students to pursue research in areas not normally covered in course work. Repeatable for credit with departmental consent. Prerequisite: instructor’s consent.

880. Seminar in Women's Studies. (3). Intensive study of selected women's studies topics. Seminar discussion, reports and research project. Repeatable for credit with departmental consent. Prerequisite: instructor's consent.

The following abbreviations are used in the course descriptions; R stands for lecture and L for laboratory. For example, 4R; 2L means four hours of lecture and two hours of lab.
University Faculty—Fall, 1991


Acker, Andrew F., Professor, Mathematics and Statistics (1987). BS, Union College, 1965; PhD, Boston University, 1970.

Ackerman, Paul D., Assistant Professor and Assistant Chairperson, Psychology (1968). BA, University of Kansas, 1964; MA, 1966; PhD, 1968.


Adamsou, Ginette, Associate Professor and Chairperson, Modern and Classical Languages and Literatures (1965). Diplome de l'Institut des Etudes Normales, Ecole Normale d'Institutrices 1963; MA, North Carolina Central University, 1965; PhD, Washington University, 1975.

Alexander, David R., Associate Professor and Chairperson, Physics and Executive Director, Lake Afton Public Observatory (1971). BS, Kansas State University, 1967; MA, Indiana University, 1968; PhD, 1971.

Allen, Anneke S., Associate Professor, Chemistry (1964). Candidate Ryksuniversiteit Groningen Netherlands, 1952; PhD, Tulane University, 1955.


Anderson, Robert A., Professor, Educational Administration and Supervision (1967). BA, University of Iowa, 1952; MA, 1953; EdD, University of Nebraska, 1963.

Aram, Nagaraj K., Assistant Professor, Mechanical Engineering (1991). BE, Bangalore University-India, 1983; MS, Marquette University, 1983; PhD, Arizona State University, 1988.

Armstrong, Richard N., Assistant Professor and Coordinator, MA Program, Elliott School of Communication (1987). BA, Southern Utah State College, 1972; MA, Brigham Young University, 1974; PhD, Bowling Green State University, 1978.


Babich, Judith, Associate Professor, School of Performing Arts (1984). BA, Edc地狱 College, 1974; MA, University of Cincinnati, 1976; PhD, University of California, 1981.

Bagai, Rajiv, Assistant Professor, Computer Science (1990). MS, Birla Institute of Technology and Science, 1983; MS, University of Victoria, 1987; PhD, 1990.


Barrett, Elwin, Assistant Professor and Director, Undergraduate Program, Social Work (1974). BA, University of California at Berkeley, 1957; MWS, 1959; DSW, University of Southern California, 1974.

Bateman, Morita M., Associate Professor, Finance, Real Estate and Decision Sciences (1966). BSM, University of South Carolina, 1946; MS, University of North Carolina, 1950; PhD, Oklahoma State University, 1967.


Bean, LuAnn G., Assistant Professor, School of Accountancy (1980). BS, Southwest Missouri State University, 1976; MS, University of Tulsa, 1985; PhD, University of Arkansas, 1989.


Bell, John A., Associate Professor and Chairperson, Management (1971). BA, University of Southern California, 1966; PhD, Texas Tech University, 1971.


Benshoff, Lloyd M., Professor, Electrical Engineering (1967). BSEE, Oklahoma State University, 1951; MSEE, University of Missouri, 1957; PhD, Purdue University, 1965.

Benson, Fred W., Assistant Professor, Administration of Justice (1976). BA, Earlham College, 1952; MBA, University of Michigan, 1954; JD, 1957.

Bereman, Nancy, Assistant Professor, Management (1980). BA, The Wichita State University, 1969; MBA, 1974; PhD, University of Minnesota, 1983.


Bernhart, Walter D., Professor, Aerospace Engineering (1954, 1964). BSC, Kansas State University, 1950; MS, The Wichita State University, 1959; PhD, Oklahoma State University, 1964; Licensed Professional Engineer—Kansas.


Billings, Dorothy K., Assistant Professor, Anthropology (1968). BA, University of Wisconsin, 1963; MA, University of Sydney, 1972.

Bischoff, William, Associate Professor, Geology (1984). BA, DePauw University, 1979; MS, Northwestern University, 1982; PhD, 1985.


Black, Phillip C., Instructor, School of Music (1986). BM, Ball State University, 1977; MM, University of New Mexico, 1980.

Blakeslee, Donald J., Associate Professor and Chairperson, Anthropology and Coordinator of General Education (1978). BA, University of Nebraska, 1969; MA, 1971; PhD, University of Wisconsin-Milwaukee, 1975.


Blazicke, Donald L., Assistant Professor, Administration of Justice (1976). BA, Northern Illinois University, 1967; MA, 1970; PhD, University of Illinois-Urbana Champaign, 1974.

Bogner, Donna J., Visiting Assistant Professor, Chemistry (1991). BS, McPherson College, 1965; MSc, The Wichita State University, 1972; PhD, Kansas State University, 1981.

Boneh, Shahar, Assistant Professor, Mathematics and Statistics (1989). BA, Tel-Aviv University, Israel, 1984; MA, University of California-Santa Barbara, 1987; PhD, 1989.

Born, John D., Jr., Associate Professor, History (1965). BA, University of Texas, 1952; MA, University of Houston, 1958; PhD, University of New Mexico, 1963.

Borresen, C. Robert, Associate Professor, Psychology (1965). BS, Northwestern University, 1953; AM, University of Missouri, 1958; PhD, 1963.

Boughton, Harrison C., Professor, School of Music (1961). BA, University of Northern Iowa, 1956; MA, University of Denver, 1959; DMA, University of Missouri-Kansas City, 1975.

Bousfield, George R., Assistant Professor, Biological Sciences (1991). BS, Saginaw Valley State University, 1974; MA, Indiana University, 1976; PhD, 1981.

Bowen, Brent D., Assistant Professor and Director, Aviation Management (1989). BS,
Art

FACULTY 205

Consiglio, Catherine A., Assistant Professor, Biological Sciences and Assistant Dean of Facilities for Personnel (1966). BS, University of Utah, 1954; MSE, The Wichita State University, 1966; PhD, University of Kansas, 1979. 


Brandhorst, Armin L., Assistant Professor, Engineering and Director, Physical Plant (1964). BSME, Kansas State University, 1959; MSME, Oklahoma State University, 1964. 

Bravo-Elizondo, Pedro, Professor, Modern and Classical Languages and Literatures (1975). Universidad Tecnica del Estado, Chile, 1957; MA, Education, Catholic University, Valparaiso, Chile, 1964; MA, University of Iowa, 1971; PhD, University of Iowa, 1978. 

Brinkman, Sidney E., Assistant Professor, School of Accountancy (1958, 1965). BA, The Wichita State University, 1956; MS, 1966; CPA—Kansas. 

Britten, Clark V., Jr., Professor, School of Art and Design (1957). BAA, Auburn University, 1952; MA, 1955. 

Brock, Thomas H., Assistant Professor and Associate Director, Broadcasting Services (1980). BS, University of Illinois, 1969; MEd, 1970. 

Brooks, Christopher K., Assistant Professor, English (1989). BA, Indiana University, 1977; MA, Indiana State University, 1979; PhD, Purdue University, 1986. 


Brown, Thomas E., Associate Professor, Biological Sciences (1982). BA, Miami University—Ohio, 1974; MS, 1976; PhD, University of Georgia, 1981. 

Buell, Gregory J., Assistant Professor, Associate Director, Counseling and Director, Clinical Services (1975). BS, University of Iowa, 1968; MA, Southern Illinois University, 1972; PhD, 1975. 


Burdette, Janice Sue, Instructor and Student Development Specialist, Reading/Study Skills Center (1988). BS, Oklahoma State University, 1979; MS, 1981. 


Burk, Kenneth W., Professor, Communicative Disorders and Sciences (1971). BA, University of Iowa, 1953; MA, University of Kentucky, 1955; PhD, Purdue University, 1962. 


Burns, Dennis H., Assistant Professor, Chemistry (1989). BS, University of California-Los Angeles, 1981; PhD, University of California-Davis, 1986. 


Cade, Mary, Assistant Professor, Nursing (1990). BS, University of Kansas, 1986; MSN, The Wichita State University, 1989. 


Campbell, Kathryn D., Assistant Professor, Physical Education (1987). BS, New Mexico State University, 1972; MS, Oklahoma State University; 1977; EdD, 1981. 


Carver, Raymond, Associate Professor, Physics (1967). BS, State University of New York at Albany, 1960; PhD, University of Mississippi, 1963. 

Carvers, Ronald Dean, Assistant Professor and Clinic Director, Communicative Disorders and Sciences (1968). BA, The Wichita State University, 1964; MA, 1968; PhD, 1980. 


Chung, Dae H., Professor, Administration of Justice (1957). BA, Michigan State University, 1957; MA, 1958; PhD, 1962. 

Chaudhuri, Jhaba, Associate Professor, Mechanical Engineering (1984). BS, Lady Washington College, Calcutta University, 1967; MS, State University of New York, 1975; PhD, Rutgers University, 1982. 

Cheng, Jen-Chi, Assistant Professor, Economics (1989). BA, National Cheng Kung University, 1978; MA, National Taiwan University, 1982; PhD, Vanderbilt University, 1989. 

Cheung, Claire M., Assistant Professor and Director, University Child Development Center (1972). AB, Washburn University, 1956. 

Cho, Dong Woo, Professor, Economics (1972). BA, Seoul National University, Korea, 1965; MA, Wayne State University, 1969; PhD, University of Illinois, 1973. 

Choi, In-Chan, Assistant Professor, Industrial Engineering (1990). BS, Korea University, 1982; BSIE, Iowa State University, 1982; MS, Columbia University, 1986; MF, 1988; PhD, 1990. 

Chopra, Dharam Vir, Professor, Mathematics and Statistics (1967). BA, Punjab University, India, 1950; MA, 1953; MA, University of Michigan, 1961; AM, 1963; PhD, University of Nebraska-Lincoln, 1968. 

Chou, Shang-Ching, Associate Professor, Computer Science (1991). BS, Shanghai Teachers' College (China), 1965; MS, University of Texas at Austin, 1984; PhD, 1985. 

Christ, Ronald, Associate Professor, School of Art and Design (1976). BFA, Kansas City Art Institute, 1972; MFA, Indiana University, 1974. 

Christensen, Donald G., Assistant Professor, Finance, Real Estate and Decision Sciences (1983). AA, Olympic College, 1974; BBA, Memphis State University, 1979; MBA, 1982; PhD, University of South Carolina, 1988. 

Christensen, Linda F., Associate Professor, School of Accountancy (1988). BSBA, University of Missouri-Columbia, 1973; MBA, Memphis State University, 1981; PhD, University of South Carolina, 1989. 

Ciboski, Kenneth N., Associate Professor, Political Science (1968). BA, University of Kansas, 1961; MA, 1965; PhD, University of Washington, 1971. 

Clark, James E., Assistant Professor, Economics and Director, Center for Economic Education (1976). BA, Michigan State University, 1969; MA, Northwestern University, 1971; PhD, 1976. 

Clark, Leroy, Professor and Chairperson, School of Performing Arts (1990). BA, University of Maine, 1966; MFA, University of Oklahoma, 1966; PhD, Kent State University, 1976. 


Cochrane, Diana L., Associate Professor, Clinical Psychologist (1978). BA, Emory University, 1979; MHS, The Wichita State University, 1986. 


Conrad, Mary Elaine, Assistant Professor, Medical Technology (1980). BA, Kansas Newman College, 1957; MS, Kansas State University, 1974. 


Cook, Nada, Assistant Professor, Modern and Classical Languages and Literatures (1988). BA, University of Zagreb, Yugoslavia, 1979; MA, University of California at Berkeley, 1984; PhD, 1989. 

Corbett, Donald L., Professor, School of Music (1971). BME, The Wichita State University, 1953; MME, 1959; EdD, University of


Coffield, Charles S., Assistant Professor and Program Director, Respiratory Therapy (1978, 1983). BS, Indiana University of Pennsylvania, 1974; MS, Kansas State University, 1983.


Cranford, Jerry L., Associate Professor, Communicative Disorders and Sciences (1985). BA, The Wichita State University, 1964; PhD, Vanderbilt University, 1969.


Crumm, Dorothy E., Associate Professor, School of Music (1973). BA, Barrington College, 1959; MA, University of Kentucky, 1969; DMA, University of Colorado, 1977.

Dasdakazadeh, Mohamad, Assistant Professor, Finance, Real Estate and Decision Sciences (1989). MS, Massachusetts Institute of Technology, 1978; MBA, American International College, 1979; PhD, University of Massachusetts, Amherst, 1985.


deSilva, Dharma, Associate Professor, Management (1976). BSBA, University of Evansville, 1957; MS, Southern Illinois University 1959; PhD, Indiana University, 1966.

Deskins, James W., Professor and Director, School of Accountancy (1985). BA, University of Oklahoma, 1960; MBA, 1961; PhD, University of Texas at Austin, 1965. CPA—Oklahoma and Texas.
Foran, Nancy Joyce, Associate Professor, School of Accountancy (1979). BS, University of California at Los Angeles, 1965; MA, The Wichita State University, 1973; MS, Emporia State University, 1974. PhD, University of Texas, 1979.

Fox, L. Raymond, Professor, Biological Sciences (1979). BA, University of California, Santa Barbara, 1963; PhD, 1967.


Fry, Mervin W., Visiting Professor, Educational Psychology and Dean, Education (1988). BS, University of South Dakota, 1957; MS Ed, 1963; PhD, University of Iowa, 1967.

Fulji, William E, Associate Professor, Geology (1982). BS, University of Notre Dame, 1969; MS, University of Illinois-Chicago Circle, 1980; PhD, University of South Carolina, 1982.


Furtwengler, Carol B., Associate Professor, Educational Administration and Supervision (1990). BS, Bowie State University, 1972; MA, George Mason University, 1976; PhD, Vanderbilt University, 1980.


Garver, Stockton H., Assistant Professor, School of Art and Design (1973). BA, Harvard University, 1964; MA, Indiana University, 1972; PhD, 1980.


Gaunt, Philip, Associate Professor and Director, Research and International Program, Elliott School of Communication (1990). BA, Reed College, U.K., 1959; MA, Indiana University, 1988; PhD, 1989.


Gibson, George, Professor, School of Music (1967, 1968). BM, University of Miami, 1956; MM, University of Texas, 1959; DMA, University of Southern California, 1971.


Goodell, Phillips W., Assistant Professor, Marketing and Small Business (1966). AB, Princeton University, 1953; MBA, Stanford University, 1957; PhD, Texas Tech University, 1967.

Gosman, Albert L., Professor, Mechanical Engineering (1967). BSME, University of Michigan, 1950; MSME, University of Colorado, 1955; PhD, University of Iowa, 1965.

Gottuso, Carol, Instructor, Management (1988). BSBA, Creighton University, 1979; MA, University of Nebraska, 1981.

Graham, April L., Visiting Assistant Professor, Curriculum and Instruction (1991). BA, Drake University, 1973; MA, 1975; PhD, University of Kansas, 1983.

Graham, A. Richard, Professor, Mechanical Engineering and Director, Center for Productivity Enhancement (1965). BSME, Kansas State University, 1957; MS, 1960; PhD, University of Iowa, 1966.

Graham, Gerald H., R.P. Clinton Distinguished Professor, Management and Director, Center for Entrepreneurship (1967). BS, Northwestern State College, 1959; MSBA, 1960; PhD, Louisiana State University, 1968.

Greenberg, Gary, Professor, Psychology (1967). BS, Yeshiva University, 1962; MA, The Wichita State University, 1964; PhD, Kansas State University, 1970.

Gregg, Alvin L., Assistant Professor, English (1968). BA, Texas Tech University, 1956; MA, 1957; PhD, University of Texas, 1969.

Gregory, Diane C., Associate Professor, School of Art and Design (1990). BS, University of Missouri-Columbia, 1974; MS, 1979; PhD, 1982.

Greywall, Mahesh S., Professor, Mechanical Engineering (1969). BSC, University of Allahabad, India, 1953; BS, University of California at Berkeley, 1957; MS, 1959; PhD, 1962; Licensed Professional Engineer-Kansas.

Griffith, Kathryn, Professor, Political Science (1954). BA, The Wichita State University, 1947; MS, 1948; MFA, Syracuse University, 1954; PhD, University of Chicago, 1967.

Gueygiel, William C., Professor, Chemistry (1980). BS, American University of Beirut, 1969; PhD, University of Kentucky, 1975.


Gyftiel, Anthony P., Associate Professor, English (1971). Diplome d'Humanites, St. Stanislas Poperinge, Belgium, 1950; Bth, Maison de Philosophie, Brussels, Belgium, 1953; MA in Theology, Maison de Theologie, Universite de Louvain, Belgium, 1957; MA, University of Detroit, 1966; PhD, 1971.

Hackett, Donald W., Associate Professor, Marketing and Director, Center for Management Development (1973). BBA, University of Oklahoma, 1967; MBA, 1970; DBA, 1974.

Halcomb, Charles G., Professor, Psychology (1980). BA, Oklahoma Baptist University, 1978; PhD, Baylor University, 1984.


Hawley-Wolfe, Donna J., Associate Professor, Nursing and Director, Graduate Nursing Education (1981). BSN, University of Iowa, 1968; MA, University of Missouri at Kansas City, 1971; MN, University of Kansas, 1980;
Massachusetts, 1954; MBA, 1958; PhD, University of Illinois, 1962.


Headley, Dean, Assistant Professor, Marketing and Small Business (1988). BS, Emporia State University, 1972, MA, University of Oklahoma, 1974; MBA, The Wichita State University, 1982; PhD, Oklahoma State University, 1989.


Hellman, James, Assistant Professor, School of Art and Design (1989). BA, The Wichita State University, 1972; MA, 1975.


Hersch, Philip, Associate Professor, Economics (1983). BA, Queens College, 1974; MA, Ohio State University, 1978; PhD, 1982.

Hill, Gretchen J., Assistant Professor, Sociology (1991). BA, Washburn University, 1984; MA, University of Missouri at Kansas City, 1987; PhD, University of Kansas, 1990.


Ho, James C., Distinguished Trustees Professor, Physics and Senior Staff Scientist, National Institute for Aviation Research (1971). BS, National Taiwan University 1959; MS, University of California at Berkeley, 1963; PhD, 1966.

Ho, Lop-Hing, Assistant Professor, Mathematics and Statistics (1989). BA, Chinese University of Hong Kong, 1979; MA, Princeton University, 1982; PhD, 1984.

Hoag, Gerald B., Associate Professor, English (1967). AB, Loyola University, New Orleans, 1951; MA, Tulane University, 1955; PhD, 1965.


Hoffmann, Klaus A., Associate Professor, Aerospace Engineering (1990). BS, University of Texas at Austin, 1972; MS, 1975; PhD, 1983.

Holman, Linda, Assistant Professor, Medical Technology (1972). BA, Emporia State University, 1965; MT (ASCP), 1965; BS (ASCP), 1972; MEd, The Wichita State University, 1977.

Holmes, Ellen C., Associate Professor, Health Administration and Gerontology and Academic Coordinator, Gerontology (1975). BA, The Wichita State University, 1968; MA, 1972; PhD, 1980.

Hommes, Donald L., Professor and Chairperson, Industrial Engineering (1976). BA, Wichita State University, 1965; MS, 1968; PhD, University of Arkansas, 1975.


Hooper, Steven J., Assistant Professor, Aerospace Engineering (1987). BS, Iowa State University, 1973; MS, The Wichita State University, 1976; PhD, Iowa State University, 1983.


House, Sandra S., Assistant Professor, Sociology (1991). BA, Drake University, 1969; MPA, University of Missouri at Kansas City, 1978; PhD, Pennsylvania State University, 1986.


Huber, Tonya, Assistant Professor, Curriculum and Instruction (1990). BS, Pennsylvania State University, 1982; MEd, 1985; PhD, 1990.

Huckstadt, Alicia A., Associate Professor, Nursing (1973). BS, The Wichita State University, 1975; MN, 1978; PhD, Kansas State University, 1981; PhD, University of Colorado, 1990.

Hughes, David, Assistant Professor, Anthropology (1988). BS, West Texas State University, 1973; MA, University of Arkansas, 1977; PhD, Oklahoma State University, 1980; MEd, University of Oklahoma, 1981.

Hunts, Joel, Assistant Professor, Health Administration and Gerontology (1980). BS, Iowa State University, 1954; MS, 1955.

Kemme, David M., Professor and W. Frank Barton Faculty Fellow, Economics (1986). BA, Miami University, Oxford, Ohio, 1973; MA, Ohio State University, 1974; Ph.D, 1980.


Kilian, Donald G., Associate Professor, Mathematics and Statistics (1958). BS, Southeast Missouri State University, 1952; ME, University of Missouri, 1956; AM, 1958.


Kirby, S. Keith, Assistant Professor and Director, Cooperative Education (1977). BS, Pittsburg State University, 1952; MS, 1973.

Kitck, Sally L., Associate Professor and Director, Women's Studies (1969). AB, Cornell University, 1967; MA, University of Chicago, 1968; PhD, Emory University, 1984.


Klingsporn, M. James, Assistant Professor, Mathematics (1991). MA, ETH Zurch, Germany, 1984; PhD, Purdue University, 1987.


Knell, Thomas R., Assistant Professor, Cooperative Education (1977). AB, Bowdoin College, 1955; MS, Syracuse University, 1960; PhD, University of Iowa, 1972.


Kneek, Carol W., Assistant Professor, Women's Studies and Associate Dean, Liberal Arts and Sciences (1969). BS, University of Kansas, 1961; MA, The Wichita State University, 1968; PhD, University of Oklahoma, 1977.


Kruger, Susan F., Associate Professor and Chairperson, Nursing (1979). BA, Tabor College, 1970; MEd, The Wichita State University, 1975; MN, 1978; EdDs 1982; PhD, Kansas State University, 1987.


Kuenzi, Gary, Professor, Industrial Engineering and Director, IBM CIM Center (1987). BSIE, Texas Tech University, 1964; MSIE, 1966; PhD, 1967.

Lancaster, Kirk E., Associate Professor, Mathematics and Statistics (1980). AB, Humboldt State University, 1975; PhD, Oregon State University, 1983.

Lang, Virginia A., Associate Professor, Psychology (1990). BA, State University College at New Paltz, 1971; MA, Towson State University, 1975; PhD, State University of New York, 1990.


Lause, Timothy W., Assistant Professor, Sociology (1978). BS, Central Missouri State University, 1973; MA, 1974; PhD, St. Louis University, 1981.


Leland, Christopher M., Director and Assistant Professor, Elliott School of Communication (1991). BA, Ripon College, 1986; MA, University of Arkansas, 1988; PhD, University of

Lengnick-Hall, Cynthia A., Associate Professor, Management (1990). BA, University of California-Los Angeles, 1970; MBA, 1976; PhD, University of Texas at Austin, 1981.

Lengnick-Hall, Mark L., Assistant Professor, Management (1990). BBA, University of Texas at Austin, 1975; MBA, 1980; PhD, Purdue University, 1988.

Levi, Donald, Kansas Chair, Real Estate and Land Use Economics and Professor and Chairperson, Finance, Real Estate and Decision Sciences (1986). BS, University of Michigan, 1984; JD, 1966; PhD, Washington State University, 1974.


Livingston, Alan, Assistant Professor and Associate Director, Media Services (1978). BA, University of Utah, 1974; PhD, Brigham Young University, 1984.

Loper, Gerald D., Jr., Associate Professor, Physics and Associate Dean, Liberal Arts and Sciences (1964). BA, The Wichita State University, 1959; MS, Oklahoma State University, 1962; PhD, 1964.

Lowe, Roger D., Assistant Professor, School of Accountancy and Vice President, Administration and Finance (1968). BSBA, Pittsburg State University, 1960; CPA—Kansas.


Malloy, J. William, Assistant Professor, Philosophy (1965). BA, Northwestern University, 1957; MA, 1962; PhD, 1970.


Mandt, Almer Joseph, Associate Professor, Philosophy (1976). BA, Trinity College, 1972; MA, Vanderbilt University, 1974; PhD, 1978.


Martin, Charles L., Associate Professor, Marketing and Small Business (1985). BBA, West Texas State University, 1981; MBA, 1982; PhD, Texas A&M University, 1986.

Maseman, Denise Cicelle, Assistant Professor, Dental Hygiene (1981). BS, University of Nebraska, 1974; MS, University of Missouri-Kansas City, 1978.

Masud, Abu S.M., Associate Professor and Associate Chairperson, Industrial Engineering (1980). BS, Bangladesh University of Engineering and Technology, 1969; Diploma Institute of Business Administration, 1973; MSIE, Kansas State University, 1975; PhDIE, 1978.

Mathis, Julie A., Assistant Professor, Mechanical Engineering (1990). BSE, Northern Arizona University, 1979; MSE, University of New Orleans, 1984; PhD, Louisiana State University, 1989; Licensed Professional Engineer—Louisiana and Kansas.

Mathis, William E., Professor and Chairperson, School of Music (1969). BS, Brigham Young University, 1957; MS, 1961; PhD, University of Michigan, 1969.


McCarten John B., Assistant Professor, Chemistry (1990). BS, Creighton University, 1958; MS, 1960; PhD, University of Iowa, 1964.

McCormick, Jack R., Assistant Professor, Counseling and Education (1975). BFA, University of Texas, 1968; MFA, North Texas State University, 1974.

McCormick, B. Jack, Professor, Philosophy (1979). BS, West Texas State University, 1959; PhD, Oklahoma State University, 1962.


McKennon, James W., Associate Professor, Political Science and Director, Honors Program (1966). BA, Willamette University, 1958; MA, University of Oregon, 1964; PhD, 1969.


Meissner, Gregory J., Associate Professor, Psychology (1980). BA, The Wichita State University, 1977; PhD, University of Tennessee, 1980.

Mendieta, Gonzalo R., Assistant Professor, Mathematics and Statistics (1987). Egregio, Escuela Politecnica Nacional, Quito, Ecuador, 1992; MS, Purdue University, 1984; PhD, University of Iowa, 1987.

Merriam, Daniel F., WSU Endowment Associate Distinguished Professor, Natural Sciences (1981). BS, University of Kansas, 1949; MS, 1953; PhD, MSc, Leicester University, England, 1969; DSc, 1975.


Miller, Glen don R., Associate Professor and Director, Hazardous Materials Office, Biological Sciences (1987). BS, Southern Illinois University, 1960; MA, 1962; PhD, University of Missouri, 1967.


Millet, Nancy C., Professor, Curriculum and Instruction (1968). BA, University of Rochester, 1959; MA, 1961; EdD, University of Colorado, 1972.


Minneman, Margaret A., Assistant Professor, Dental Hygiene (1980). BS, University of Minnesota, 1966; MS, 1969.

Mitchusson, Linda C., Associate Professor, School of Accounting (1977). BS, Central University, 1968; MPA, University of Arkansas, 1969; PhD, 1975; CMA.


Moore, Kenneth D., Professor and Department Chair, Curriculum and Instruction (1991). BA, The Wichita State University, 1969; MSe, 1971; EdD, University of Houston, 1975.


Moore-Jansen, Cathy, Assistant Professor and Social Science Librarian, Library (1989). MLS, University of Tennessee, 1986.

Moore-Jansen, Peer, Assistant Professor, Anthropology (1989). BA, Texas Tech University, 1977; MA, University of Arkansas, Fayetteville, 1982; PhD, University of Tennessee, Knoxville, 1989.
Southwestern College, 1964; MS, Emporia State University, 1967.

Richards, Donald H., Assistant Professor, Clinical Sciences—Respiratory Therapy (1990). BS, State University of New York at Stony Brook, 1975; MS, 1979.

Richards, R. Malcolm, Dean of Barton School of Business and Professor of Finance (1991). BA, University of Utah, 1968; MBA, 1970; PhD, University of Michigan, 1974.

Richardson, William H., Associate Professor and Associate Chairperson, Mathematics and Statistics (1962). AB, California State University, Chico, 1959; MS, Iowa State University, 1961.

Ritchie, Gisela F., Associate Professor, Modern and Classical Languages and Literatures (1965). MA, Free University of Berlin, 1952; PhD, University of Michigan, 1965.

Robarchek, Clayton A., Associate Professor, Anthropology (1985). BA, University of Nebraska, 1970; PhD, University of California, 1977.

Roberts, M. Diane, Associate Professor, Health Science and Dean, Health Professions (1984). BS, Mississippi State University, 1963; MS, 1964; DPH, University of Texas School of Public Health, 1976.


Rogers, Ben F., Associate Professor, Philosophy (1966). BA, University of Tennessee, 1958; MA, Vanderbilt University, 1961; MA, Indiana University, 1964; PhD, University of Virginia, 1969.


Romig, Charles A., Associate Professor, Counseling, Educational and School Psychology (1985). BA, University of Illinois, 1977; MA, Trinity Evangelical Divinity School, 1979; PhD, Purdue University, 1982.

Roush, Dean, Assistant Professor, School of Music (1988). BFA, University of Iowa, 1977; MM, Bowling Green State University, 1975; DMA, Ohio State University, 1985.

Rozelle, Robert W., Assistant Professor, University College and Coordinator, Advising Services (1978). BA, University of New York, Cortland, 1966; MEd, Ohio State University, 1967.


Saalmann, Dieter, Professor, Modern and Classical Languages and Literatures (1971).

Salerno, Peter, Associate Professor, English (1985). BA, University of Missouri—Kansas City, 1979; MA, University of Missouri-Columbia, 1981; PhD, University of Missouri, 1986.


Scudder, R. Rosalind R., Associate Professor and Chairperson, Communicative Disorders and Sciences (1972). BA, The Wichita State University, 1964; MA, 1967; PhD, 1978.


Shawver, Martha M., Associate Professor, Nursing, Health Professions, and Acting Associate Vice President for Academic Affairs (1981). BS, 1978; MBA, 1983; MA, University of Missouri, 1983. MA in Nursing, University of Iowa, 1974; PhD, University of Kansas, 1985.

Sheffield, James F., Associate Professor, Political Science (1974). BA, Mississippi State University, 1969; MS, Florida State University, 1970; PhD, 1973.


Slingerland, F. Yvonne, Assistant Professor, Physical Therapy (1985). BS, University of Wiscon-
Smith, Bert L., Professor and Chairperson, Aerospace Engineering (1966). BSME, University of Missouri at Rolla, 1953; MSME, 1960, PhD, Kansas State University, 1966.


Smith, Nicholas E, Associate Professor, School of Music (1975). BM, Pittsburg State University, 1970; MM, Eastman School of Music, 1972; DMA, 1980.

Smith, Patrick S., Visiting Associate Professor, School of Art and Design (1991). BA, University of Kansas, 1987; MA, University of North Carolina, 1975; PhD, Northwestern University, 1982.

Snyder, Jacqueline J. Associate Professor, American Studies, Dean, Continuing Education and Director, Summer Session (1975). BA, College of St. Catherine, 1963; MA, Indiana University, 1966; DA, University of Oregon, 1973.


Snyder, Melvin H., Jr., Professor Emeritus, Aerospace Engineering and Director, Center for Basic and Applied Research (1947). BSME, Carnegie-Mellon University, 1947; MS, The Wichita State University, 1951; PhD, Oklahoma State University, 1967. Licensed Professional Engineer—Kansas.


Soles, David E. Associate Professor, Philosophy (1974, 1982). BA, University of Pittsburgh, 1969; PhD, Johns Hopkins University, 1977.


Sowards, J. Kelley, Distinguished Trustees Professor, Humanities (1956). BA, The Wichita State University, 1947; MA, University of Michigan, 1948; PhD, 1952.


Stanga, John E., Jr., Associate Professor and Chairperson, Political Science (1968). BA, Southeastern Louisiana University, 1961; MA, Louisiana State University, 1963; PhD, University of Wisconsin, 1971.

Steck, James E., Assistant Professor, Mechanical Engineering (1990). BS, University of Missouri at Rolla, 1980; MS, 1984; PhD, 1989.

Steinke, Elaine, Assistant Professor, Nursing (1990). BSN, The Wichita State University, 1979; MN, 1982; PhD, Kansas State University, 1987.

Stephan, Rebecca Walker, Instructor and Assistant Director, School of Accounting (1986). BS, Fort Hays State University, 1977; MBA, 1979: CPA—Kansas.

Stephens, Frances C., Associate Professor, English (1970). BA, Texas A&M University, 1966; MA, University of Texas, 1967; PhD, 1970.

Stephens, J. Kim, Assistant Professor, School of Performing Arts (1987). BFA, Florida State University, 1977; MFA, California Institute of the Arts, 1983.

Stevenson, William T.K., Associate Professor, Chemistry (1987). BS, University of Glasgow, 1981; MA, 1984; PhD, Queen’s University, 1989.

Stone, Brian J., Assistant Professor, Counseling, Educational and School Psychology (1980). BA, Columbia College, 1983; MEd, Brigham Young University, 1985; PhD, Ball State University, 1989.


Strecker, Joseph L., Associate Professor, Physics (1968). BS, Rockhurst College, 1955; PhD, Johns Hopkins University, 1961.


Sudemann, Frederick, Assistant Professor, Political Science and Executive Assistant to the President; Director, Governmental Relations (1984). BA, The Wichita State University, 1958; MA, 1960.

Sullivan, Betty A., Assistant Professor and Director of Undergraduate Program, Nursing (1971, 1976, 1986). BSN, University of Kansas, 1958; MEd, The Wichita State University, 1973; MEd, 1983; PhD, University of Texas at Austin.


Sutterlin, Peter G., Professor and Coordinator of General Education, Geology (1983). BS (Hon), Mc-Master University, 1953; PhD, Northwestern University, 1958.


Sweney, Arthur B., Professor, Management (1965). BS, University of Illinois, 1947; MSW, 1949; PhD, University of Houston, 1958.


Taggart, Thoburn, Jr., Assistant Professor and Interlibrary Loan Librarian, Library (1962). BA, University of the South, 1953; MA, George Peabody College for Teachers, 1958.
Treichak, Andrew, Assistant Professor, School of Music (1980). BM, Oberlin Conservatory, 1973; MM, State University of New York at Stony Brook, 1975.

Triponey, Vicky L., Assistant Professor and Associate Dean, Student Life and Services (1989). BS, University of Pittsburgh at Johnstown, 1979; MA, Indiana University of Pennsylvania, 1981; PhD, University of Virginia, 1989.


van Boer, Bertil H., Associate Professor, School of Music (1987). AB, University of California-Berkeley, 1974; MA, University of Oregon, 1978; PhD, University of Uppsala, Sweden, 1983.


Veeseer, Harold A., Assistant Professor, English and Director, English Composition (1987). BA, Columbia University, 1972; MA, 1975; MPhil, 1978; PhD, 1981.


Vincent, Michael, Associate Professor, Modern and Classical Languages and Literatures (1980). BA, St. John’s University, 1972; Diplome de langue et de civilisation francaise, Universite de Paris, 1973; MA, University of Wisconsin, 1974; PhD, 1979.


Wahibeck, Phillip G., Professor, Chemistry (1972). BS, University of Illinois, 1954; PhD, 1969.


Webb, Samuel C., Professor, Economics (1966). BS, University of Missouri, 1957; MS, 1959; PhD, University of Kansas, 1968.


Wells, Candace, Assistant Professor, Curriculum and Instruction (1980). BA, University of Chicago, 1971; MA, University of Missouri, 1973; EdD, Oklahoma State University, 1980.


Wentz, William H., Jr., Distinguished Professor, Aerospace Engineering and Executive Director, National Institute for Aviation Research and Director, Center for Basic and Applied Research (1957, 1963). BS, The Wichita State University, 1955; MS, 1961; PhD, University of Kansas, 1969. Licensed Professional Engineer—Kansas.

Whitney, Robert C., Associate Professor of Mathematics and Statistics (1962). BS, Tulane University, 1955; MS, 1961; PhD, New Mexico State University, 1971.

Widener, Russell D., Assistant Professor, School of Music (1981). BM, Baylor University, 1968; MM, Catholic University, 1972.


Wiebe, Raymond F., Assistant Professor and Academic Counselor, University College (1965). AB, Tabor College, 1953; MS, Kansas State University, 1965.


Williams, Brian W., Assistant Professor and Business Librarian, Library (1985). BA, Ball State University, 1975; MBA, 1981; MLS, Indiana University, 1982.

Williamson, L. Keith, Assistant Professor, Elliott School of Communication (1977). BA, The Wichita State University, 1965; MTh, Southern Methodist University, 1968; PhD, Temple University, 1980.


Wineke, Donald R., Associate Professor and Interim Chairperson, English (1971). BA, University of Washington, 1960; MA, Pennsylvania State University, 1962; PhD, Indiana University, 1971.


Wood, Michael A., Assistant Professor and Director, Media Resources Center (1985). BS, Kansas State University, 1969; MS, 1973; MFA, University of Southern California, 1979.


Yannek, Brigitte Rouselle, Assistant Professor, Modern and Classical Languages and Literatures (1990). BA, University of La Sorbonne, 1975; MA, 1981; PhD, University of Kansas, 1991.


Yeotis, Catherine G., Assistant Professor, Curriculum and Instruction (1979). BS, Michigan State University, 1963; MS, Purdue University, 1973; PhD, 1978.

Young, Associate Professor, Economics (1968). BA, Lynchburg College, 1956; MA, University of Minnesota, 1958; PhD, 1967.

York, Paul K., Professor, Electrical Engineering (1989). BSEE, Texas A&M University, 1961; MSEE, University of New Mexico, 1963; PhD, Texas A&M University, 1967.

Youngman, Arthur L., Assistant Professor, Biological Sciences (1965). BA, Montana State University, 1959; MS, Case Western Reserve University, 1961; PhD, University of Texas, 1965.

Zafar, Hadi U., Assistant Professor, Health Administration and Gerontology (1986). BSE, University of Engineering, Pakistan, 1975; MBA, The Wichita State University, 1982.

Zane, Mehrin E., Associate Professor and Chairperson, Chemistry (1966). BA, Friends University, 1960; MS, The Wichita State University, 1963; PhD, Arizona State University, 1965.


Applied Music Instructors

Fall, 1991

Steve Betts
Phil Black
David C. Brody
Judith A. Fear
Mark Foley
Susan Frazier
Cheryl Coad
Kristin A. Heslop
Aarón Keaster
Elizabeth Annem Lindal
Les Linn
Edwin Livingston
Kevin J. May
Dianna Messer
Craig Owens
Ann Roush
Martha Jean Schreiner
Brenda Weckley

Lecturers and Adjunct/Faculty

Associates Fall, 1991

Aaron-Leary, S. Leigh—Psychology
Aarsen, Johannes—Finance, Real Estate and Decision Sciences
Allgod, Don A.—English
Alvarez, Steven M.—Mathematics and Statistics
Amerine, Robert A.—Computer Science
Anderson, Mark F.—Administration of Justice
Arenga, Yeshewawoin—Mathematics and Statistics
Bailey, Hetty S.—Modern and Classical Languages and Literatures
Banowetz, Arleen F.—Media Courses
Barrett, Brad K.—Marketing and Small Business
Berger, Stuart David—Educational Administration/Supervision
Biggs, Thomas—Curriculum and Instruction
Bierstorf, Elaine D.—Continuing Education
Boufard, David L.—Marketing and Small Business
Brodkill, Margot A.—Sociology
Broberg, Jean M.—Nursing
Brown, Douglas Randall—Elliott School of Communication
Carrell, Brian D.—Continuing Education
Catt, Catherine Marie—English
Chalhoub, Mohamed Amine—Mathematics and Statistics
Cherches, Susan Rae—Management
Chong, Kenny K.—Mathematics and Statistics
Christy, Ronald L.—College of Fine Arts
Clark, James E.—Continuing Education
Clarkson, Elizabeth P.—Mathematics and Statistics
Clements, William D.—Elliott School of Communication
Coberly, Mark C.—Physical Education
Collins, Patricia A.—Elliott School of Communication
Cooney, Bernard G.—Modern and Classical Languages and Literature
Conley, Peter Duane—Physical Education
Cook, Beverly J.—Dental Hygiene
Cox, Theresa A.—Elliott School of Communication
Criser, Jane A.—Dental Hygiene
Doh, David L.—Marketing and Small Business
Dawes, Karen Sue—Continuing Education
Deaver, Margaret—Curriculum and Instruction
Deckard, Elizabeth A.—Mathematics and Statistics
Decker, Teresa N.—Economics
Delgado, Teressa A.—Physical Education
Elliott, Jean B.—Continuing Education
Ely, Frances M.—Geology
Fleming, Larry R.—Elliott School of Communication
Frazier, Lynn—Curriculum and Instruction
Fuller, Thomas—Administration of Justice
Goudhalekar, Vasundhara B.—Mechanical Engineering
Goodwin, E. Allen—Reading and Study Skills Center
Goodwyn, Susan M.—Communicative Disorders and Sciences
Gothard, Lori Linst—Elliott School of Communication
Greenberg, Gary—Media Courses
Gregory, Tarra D.—Psychology
Guarino, Steve—Elliott School of Communication
Curley, Clyde J.—Marcus Center, Credit Free Program
Gwaltney, Thomas Larry—Educational Administration/Supervision
Hagan, Emilie A.—Nursing
Hampton, David R.—Respiratory Therapy
Handy, Nancy L.—School of Music
Hanssen, Gary M.—Finance, Real Estate and Decision Sciences
Harp-Mobley, Shawna K.—Administration of Justice
Harris, Marjean M.—Women's Studies
Harvey, David L.—Finance, Real Estate and Decision Sciences
Hawthorne, Janet L.—Psychology
Hembrough, Therese B.—School of Performing Arts
Henderson, Roy B.—Physician Assistant
Henning, Vickie—Physical Therapy
Hess, Dennis B.—Industrial Technology
Hilligasser, Jeffrey B.—School of Accountancy
Howell, James G.—Continuing Education
Hull, Larry Wayne—Management
Humphreys, Karen M.—Women's Studies
Hurst, Christopher M.—Finance, Real Estate and Decision Sciences
Hysom, Sandra K.—Curriculum and
Instruction
James, Chester M.—Industrial Technology
Janssen, Marvin R.—Continuing Education
Jenkins, Mary E.—Women's Studies
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Key to Course Descriptions

Symbols

When two course numbers are joined by a hyphen (-), the first semester is prerequisite to the second; when the numbers have an ampersand (&) between them, the two semesters may be taken in either order. Unless specifically noted otherwise, the first course listed is offered in the fall semester and the second in the spring.

The number of hours of credit for each course is indicated in parentheses following the course title. The number of class meetings per week is normally the same as the number of credit hours. Two hours of laboratory work usually are required for one hour of credit. In courses involving meetings other than lectures, the following symbols are used: R, lecture; L, laboratory; C, conference; D, demonstration; and P, practicum, with the hours of practicum per week given in front of the letter (6-8P means six to eight hours of practicum per week).

Abbreviations

The following abbreviations of academic departments and areas are used in reference to courses offered by those departments.

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<td>Aerospace engineering</td>
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<tr>
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<td>University College</td>
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<td>Wom. S.</td>
<td>Women's studies</td>
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</table>
Map Legend
Facilities are identified with a letter corresponding to their location on the map. "P" indicates parking areas.

Buildings
Abrah Library (D)
Ahlberg Hall (C)
Blake Hall (B)
Brennan Hall I (C)
Brennan Hall II (C)
Brennan Hall III (C)
Business Education Building (C)
Campus Activities Center (C)
CAC Theater (C)
Central Energy Plant (D)
Cessna Stadium (C)
Child Development Center
Clinton Hall, R.P. (C)
Communications Building (B)
Corbin Education Center (D)
Credit Union (D)
Devlin Hall (C)
Duerksen Fine Arts Center (B)
Eck Stadium at Tyler Field (E)
Edwin A. Ulrich Museum of Art (B)
Engineering Building (D)
Fairmount Towers Commons (A)
Fairmount Towers North (A)
Fairmount Towers South (A)
Fiske Hall (B)
Gardner Plaza, Glen E. (C)
Golf Course Maintenance Building (E)
Golf Pro Shop (F)
Grace Memorial Chapel, Harvey D. (C)
Grace Wilkie Hall (D)
Henrietta Hall (C)
Heskett Center (D)

Housing Maintenance Shop (A)
Hubbard Hall, R.D. (C)
Industrial Technology (C, D)
Intensive English Language Center (A)
Jardine Hall (C)
Levitt Arena (B)
Liberal Arts and Sciences Building (C)
Lutheran Student Center (D)
Marcus Center for Continuing Education (F)
Mathematics-Physics Building (C)
McKinley Hall (B)
McKnight Art Center (B)
Media Resources Center (D)
Memorial '70 (B)
Morrison Hall (C)
National Institute for Aviation Research (E)
Neff Hall (C, D)
Newman Center (D)
Old Alumni House (C)
Old Physical Plant (D)
Original Pizza Hut (D)
Physical Plant Complex, Gaddis (D, E)
Police Department (D)
President's Residence (B)
University Alumni and Faculty Club (F)
Wallace Hall (D)
Wiedemann Hall (B)
Wilner Auditorium (B)
Woodman Alumni Center, K.T. and Mary Inez (F)

Fraternities
Alpha Tau Omega (B)
Beta Theta Pi (A)
Delta Upsilon (C)
Kappa Sigma (B)

Phi Delta Theta (C)
Pi Kappa Alpha (D)
Sigma Alpha Epsilon (B)
Sigma Phi Epsilon (C)

Sororities
Alpha Phi (D)
Delta Delta Delta (D)
Delta Gamma (D)
Gamma Phi Beta (D)

**Under construction**

Wichita State has an ongoing program to provide full access for the handicapped to all buildings; however, some barriers still exist. For information regarding any campus building's accessibility to the handicapped, call the Office of Handicapped Services, (316) 689-3309.

Visitors to the Wichita State campus should obtain temporary parking permits from the Police Department, open 24 hours a day.

Wichita State
### Degrees and Academic Majors by College

at The Wichita State University

<table>
<thead>
<tr>
<th>College and Area</th>
<th>Degree</th>
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<tbody>
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<td><strong>W. FRANK BARTON SCHOOL OF BUSINESS</strong></td>
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<tr>
<td>Personnel Administration</td>
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<td>Real Estate &amp; Land Use Economics</td>
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C = Certificate  B = Bachelor  A = Associate  S = Specialist  M = Master  D = Doctorate
# Degrees and Academic Majors by College at The Wichita State University

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<thead>
<tr>
<th>College and Area</th>
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**FAIRMOUNT COLLEGE OF LIBERAL ARTS AND SCIENCES**

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<td>Chemical Science</td>
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<td>Advertising, Public Relations</td>
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<td>Electronic Media/Visual Communication</td>
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<td>Speech Communication</td>
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